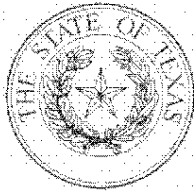


State Office of Administrative Hearings



Cathleen Parsley
Chief Administrative Law Judge

May 15, 2014

Anne Idsal, General Counsel
Texas Commission on Environmental Quality
P.O. Box 13087
Austin Texas 78711-3087

Re: SOAH Docket No. 582-13-5205; TCEQ Docket No. 2013-1191-AIR; *In Re: APPLICATION OF CORPUS CHRISTI LIQUEFACTION LLC FOR AIR QUALITY PERMIT NOS. 105710 AND PSD-TX-1306 FOR THE CONSTRUCTION OF A NATURAL GAS LIQUEFACTION AND EXPORT TERMINAL WITH REGASIFICATION CAPABILITIES*

Dear Ms. Idsal:

The above-referenced matter will be considered by the Texas Commission on Environmental Quality on a date and time to be determined by the Chief Clerk's Office in Room 201S of Building E, 12118 N. Interstate 35, Austin, Texas.

Enclosed are copies of the Proposal for Decision and Order that have been recommended to the Commission for approval. Any party may file exceptions or briefs by filing the documents with the Chief Clerk of the Texas Commission on Environmental Quality no later than June 4, 2014. Any replies to exceptions or briefs must be filed in the same manner no later than June 16, 2014.

This matter has been designated **TCEQ Docket No. 2013-1191-AIR; SOAH Docket No. 582 - 13-5205**. All documents to be filed must clearly reference these assigned docket numbers. All exceptions, briefs and replies along with certification of service to the above parties shall be filed with the Chief Clerk of the TCEQ electronically at <http://www10.tceq.state.tx.us/epic/efilings/> or by filing an original and seven copies with the Chief Clerk of the TCEQ. Failure to provide copies may be grounds for withholding consideration of the pleadings.

Sincerely,

Kerrie Jo Qualtrough
Administrative Law Judge

KJQ/vg
Enclosures
cc: Mailing List

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STYLE/CASE: CORPUS CHRISTI LIQUEFACTION LLC
SOAH DOCKET NUMBER: 582-13-5205
REFERRING AGENCY CASE: 2013-1191-AIR

**STATE OFFICE OF ADMINISTRATIVE
HEARINGS**

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**SOAH DOCKET NO. 582-13-5205
TCEQ DOCKET NO. 2013-1191-AIR**

APPLICATION OF CORPUS CHRISTI LIQUEFACTION LLC FOR AIR QUALITY PERMIT NOS. 105710 AND PSD-TX-1306 FOR THE CONSTRUCTION OF A NATURAL GAS LIQUEFACTION AND EXPORT TERMINAL WITH REGASIFICATION CAPABILITIES	§ § § § § § § §	BEFORE THE STATE OFFICE OF ADMINISTRATIVE HEARINGS
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**SOAH DOCKET NO. 582-13-5205
TCEQ DOCKET NO. 2013-1191-AIR**

APPLICATION OF CORPUS CHRISTI	§	BEFORE THE STATE OFFICE
LIQUEFACTION LLC FOR AIR	§	
QUALITY PERMIT NOS. 105710 AND	§	
PSD-TX-1306 FOR THE	§	OF
CONSTRUCTION OF A NATURAL	§	
GAS LIQUEFACTION AND EXPORT	§	
TERMINAL WITH REGASIFICATION	§	
CAPABILITIES	§	ADMINISTRATIVE HEARINGS

PROPOSAL FOR DECISION

I. INTRODUCTION

On September 4, 2012, Corpus Christi Liquefaction LLC (CCL) filed an application with the Texas Commission on Environmental Quality (TCEQ or Commission) for state air quality and federal prevention of significant deterioration (PSD) permits to construct a natural gas liquefaction and export terminal with regasification capabilities near Gregory and Corpus Christi in San Patricio and Nueces Counties, Texas (the Facility or the CCL Project). The Facility will continuously operate three ConocoPhillips Optimized Cascade Process liquefaction trains using eighteen gas-fired turbines to drive refrigeration compression and two ambient air vaporizer packages to regasify liquefied natural gas. Each train will be equipped with an acid gas removal unit that uses thermal oxidizers to control emissions. Three heavy hydrocarbon removal units will also be employed. The Facility will be capable of processing natural gas for export at an annual average rate of approximately 2.1 billion standard cubic feet per day (Bcf/d) and natural gas for import at 400 million standard cubic feet per day (MMcf/d) in the vaporization mode.

The Facility will be a new major source of volatile organic compounds (VOC), carbon monoxide (CO), nitrogen dioxide (NO₂), nitrogen oxides (NO_x), and particulate matter (both PM₁₀ and PM_{2.5}). The two counties to be impacted by the CCL Project are both in attainment (or unclassified) for National Ambient Air Quality Standards (NAAQS) Criteria Pollutants.

On July 9, 2013, the Executive Director (ED) of the TCEQ issued the draft permit and declared the application technically complete. The draft permit was subsequently revised in response to public comment and, on September 17, 2013, the ED recommended approval of the application. Prior to the ED's recommendation, the case was directly referred to the State Office of Administrative Hearings (SOAH) for a contested case hearing, and a preliminary hearing was held on August 15, 2013, in Austin, Texas. The hearing on the merits convened before Administrative Law Judges (ALJs) Kerrie Jo Qualtrough and Tommy L. Broyles on February 10, 2014. The parties to this matter are CCL, the Sierra Club, the ED, and the Office of Public Interest Counsel (OPIC). The hearing concluded on February 11, 2014, and the record closed on March 21, 2014, after written closing arguments and responses were filed.

After considering the evidence and arguments presented, the ALJs conclude that the permit should be granted.

II. OVERVIEW

A. Applicable Law

Under the Texas Clean Air Act (TCAA), codified in the Texas Health and Safety Code, the Commission shall grant a permit to construct a facility if the Commission finds:¹

- (1) the proposed facility for which a permit . . . is sought will use at least the best available control technology, considering the technical practicability and economic reasonableness of reducing or eliminating the emissions resulting from the facility; and

¹ Tex. Health & Safety Code § 382.0518(b).

- (2) no indication that the emissions from the facility will contravene the intent of this chapter [the Clean Air Act], including protection of the public's health and physical property.

Under the Commission's rules—particularly 30 Texas Administrative Code § 116.111—an applicant for an air quality permit must include in its application information demonstrating that emissions from the facility will meet the requirements for the best available control technology (BACT) (with consideration given to the technical practicability and economic reasonableness of reducing or eliminating the emissions from the facility). The Applicant must also show that the proposed facility will achieve the performance specified in the permit application.

Further, the Commission's rules at 30 Texas Administrative Code § 116.160, regarding PSD, provide requirements with which each proposed new major source in an attainment or unclassifiable area must comply. Those requirements include 40 Code of Federal Regulations (CFR) § 52.21(k), a federal requirement adopted by reference, concerning source impact analysis. In relevant part, 40 CFR § 52.21(k)(1) states:

Source Impact Analysis. The owner or operator of the proposed source . . . shall demonstrate that allowable emission increases from the proposed source . . . , in conjunction with all other applicable emission increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:

- (i) Any national ambient air quality standard in any air quality control region;
or
- (ii) Any applicable maximum allowable increase over the baseline concentration in any area.

Along these same lines, Commission rules at 30 Texas Administrative Code § 116.161 provide that the Commission may not issue a permit to a new major stationary source located in an area designated as attainment or unclassifiable for any of the NAAQS if ambient air impacts from the proposed source would cause or contribute to a violation of a NAAQS. A project's

emissions would “cause or contribute to a violation of a NAAQS when the emissions from such source . . . would, at a minimum, exceed the *de minimis* impact levels . . . at any locality that is designated as nonattainment or is predicted to be nonattainment” for the applicable NAAQS.²

These various requirements make it clear that the requested permits must be protective of human health and property, must use BACT, and must not cause or contribute to air pollution in violation of NAAQS or the maximum allowable increase over baseline concentrations. It is with these applicable requirements, among others, in mind that we now turn to the specific issues raised by the parties.

B. Issues to be Addressed

This case involves a direct referral to SOAH for a contested case hearing. Therefore, the Commission has not listed specific issues to be resolved. By the time the case reached hearing, the parties had greatly reduced the contested issues to the following:

- Does Sierra Club have standing to protest the Application?
- Should electrically-driven compression be considered as part of the BACT analysis?
- Will BACT be achieved for fugitive emissions?
- Should changes to the Special Conditions be made as proposed by OPIC?
- How should the transcription costs be allocated?

These issues are discussed in detail below, along with the other less significant issues raised by the parties in this proceeding.

² 30 Tex. Admin. Code § 116.161.

III. STANDING

Sierra Club was admitted as a party at the August 15, 2013 preliminary hearing without any questions for its witnesses and without objection. However, as detailed below, Sierra Club's party witness withdrew from being offered as a testifying witness at the hearing. Sierra Club named another member witness to testify if needed and CCL objected to the substitution and to Sierra Club's party status. For the ALJs, this issue has proven to be the most challenging, and it has required the resolution of the following questions:

- What effect, if any, did the withdrawal of Sierra Club's initial member witness have on Sierra Club's associational standing?
- Is Sierra Club required to offer a fact witness for the evidentiary hearing regarding standing?
- Is the new member witness provided by Sierra Club an affected person?
- What does recent and past case law provide and how should the judicial decisions be applied to this case?

After reviewing the facts, the parties' arguments, past Commission precedent, and case law, the ALJs find that Sierra Club has in fact met the requirements for associational standing.

A. Background

This matter was directly referred to SOAH by CCL. At the August 15, 2013 preliminary hearing, Sierra Club's counsel represented that Peter Davidson was a member of the organization and an affected person. Mr. Davidson lives on the far-east side of Portland, roughly two miles from the proposed Facility.³ Sierra Club further represented that Mr. Davidson was potentially affected by an increased load of pollutants from the Facility that might reduce his enjoyment of his property and the nature around his property as he walked along the beach. Sierra Club's

³ Prelim. Tr. at 13.

counsel alleged that Mr. Davidson was affected because CCL's modeling showed greater than *de minimus* impact of NO_x emissions at a distance of almost eight miles from the CCL Project.

Based upon the representations made by Sierra Club, CCL did not object to Sierra Club's admission as a party and did not require Mr. Davidson's testimony at the preliminary hearing. A Sierra Club employee was present and offered to testify in support of Sierra Club's organizational standing, but this offer was also declined by CCL. Accordingly, Sierra Club was named a party to this matter. A procedural schedule was set and the matter moved forward.

On September 24, 2013, Sierra Club designated Mr. Davidson as a fact witness to testify at the hearing on the merits on standing issues, even though that decision had already been made at the August preliminary hearing. In December 2013, Mr. Davidson submitted an affidavit stating that he had decided not to participate further in this proceeding due to perceived threats against his family members. He also stated in his affidavit that he was still a member of Sierra Club and re-asserted his concerns. With Mr. Davidson's refusal to participate, Sierra Club moved for leave to amend its witness list and to substitute Alvin Baker for Mr. Davidson in an effort to demonstrate Sierra Club continued to have an affected party representative.⁴ This led to objections by CCL. First, that no substitution should be allowed and second, that Mr. Baker was not an affected person. Finally, CCL urged that Sierra Club had lost its associational standing and should be struck as a party.

Initially, Sierra Club's request to substitute Mr. Baker was denied.⁵ However, upon reconsideration, the ALJs granted Sierra Club's request and ordered that Mr. Baker's membership and affected person status must relate back to the preliminary hearing, and the question was whether Mr. Baker was an affected person at the time of the preliminary hearing when Sierra Club was named a party.⁶ The ALJs also ordered that Sierra Club would have to

⁴ SC Dec. 24, 2013 Motion (Presumptively, Opposed) to Supplement its Witness List at Ex. A.

⁵ Order No. 4 (Jan. 8, 2014).

⁶ Order No. 6 (Jan. 29, 2014).

show that Mr. Baker's justiciable interest predated the preliminary hearing. This allowed the ALJs to ensure that Sierra Club approached this matter with "clean hands," that it had not attempted to bootstrap itself into party status with members obtained after the preliminary hearing.

At the February 10, 2014 hearing on the merits, Mr. Baker testified regarding his concerns with the CCL Project and how he could be affected by the Project's emissions. In their briefs filed after the evidentiary hearing, both the ED and CCL now claim that Mr. Baker is not an affected person and, therefore, that Sierra Club no longer meets the first prong of the test for associational standing.

B. Law Regarding Standing

To meet the test for associational standing, Sierra Club must demonstrate that it meets the following three prongs: (1) one of its members would otherwise have standing to request a hearing in their own right; (2) the interests Sierra Club seeks to protect are germane to its purpose; and (3) neither the claim asserted nor the relief requested requires the participation of Sierra Club's individual members in the case.⁷ In this case, only the first prong of the associational standing test is at issue.

To meet the first prong, Sierra Club must have a member who has standing, and that member must be an affected person who has a justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application.⁸ An interest common to members of the general public does not qualify as a personal justiciable interest.⁹ The factors to consider in determining whether a person is an affected person include:

⁷ 30 Tex. Admin. Code § 55.205(a).

⁸ Tex. Water Code § 5.115(a); 30 Tex. Admin. Code. § 55.203(a).

⁹ Tex. Water Code § 5.115(a); 30 Tex. Admin. Code. § 55.203(a).

- (1) Whether the interest claimed is one protected by the law under which the application will be considered;
- (2) Distance restrictions or other limitations imposed by law on the affected interest;
- (3) Whether a reasonable relationship exists between the interest claimed and the activity regulated;
- (4) Likely impact of the regulated activity on the health and safety of the person, and on the use of property of the person; and
- (5) Likely impact of the regulated activity on use of the impacted natural resource by the person.¹⁰

Historically, this standard has not required a person to show that he will ultimately prevail on the merits.¹¹ Rather, it has required a person to show that he may potentially suffer harm or have a justiciable interest greater than that of the ordinary public that will be affected.¹² A person has not been required to conclusively prove that his health, safety, or property will be affected; he need only indicate that the potential exists that he will be affected to some degree by the proposed project.¹³

C. Sierra Club's Position

At the February 10, 2014 evidentiary hearing, Sierra Club presented the testimony of Mr. Baker to serve as the organization's representative member. Mr. Baker testified that his residence is approximately 4.5 miles from the proposed plant and that he works within .25 miles of the proposed Facility. Sierra Club describes Mr. Baker's place of employment as next door to the proposed Facility. He testified that the door at his place of employment, a service-and-repair garage, is kept open most of the day for ventilation purposes. Mr. Baker also performs yard

¹⁰ 30 Tex. Admin. Code § 55.203(c).

¹¹ *Heat Energy Advanced Tech., Inc. v. West Dallas Coal. for Envtl. Justice*, 962 S.W.2d 288, 295 (Tex. App.—Austin 1998, pet. denied).

¹² *United Copper Indus., Inc. v. Grissom*, 17 S.W.3d 797, 803 (Tex. App.—Austin 2000, pet. dismissed) (citing *Heat*, 962 S.W.2d at 295).

¹³ *Id.*

work at his house and has a three-acre garden in which he spends much time. Mr. Baker also indicated that he suffers from hay fever.¹⁴

Sierra Club points out that Mr. Baker lives and works within the radius of impact (ROI) modeled by CCL for NO₂ concentrations measured on a one-hour basis. Furthermore, his place of employment is within the ROI for modeling annual NO₂ concentrations.¹⁵ Sierra Club further notes that the modeled impacts for NO₂ exceed EPA's significant impact levels (SILs) and that there is no threshold NO₂ below which there are no adverse health effects.¹⁶ Given the totality of Mr. Baker's testimony and the evidence, Sierra Club maintains that there is a reasonable relationship between the interests Mr. Baker seeks to protect and the activity the proposed permit would regulate.

D. CCL's Position

Procedurally, CCL initially argues that Mr. Baker should not have been allowed to testify as originally ordered in Order No. 4. CCL asserts that Sierra Club failed to timely designate Mr. Baker as a witness and failed to timely disclose him through discovery and there is no good cause to allow Sierra Club to amend its witness list.¹⁷

Substantively, CCL now contests Sierra Club's standing based on Mr. Baker's affected person status. CCL argues he cannot be an affected person because the record fails to demonstrate any impacts on his health or welfare. CCL recounts that the toxicology experts testified during the hearing on the merits that its proposed emissions are below the applicable NAAQS and, therefore, the emissions are not be expected to cause adverse health or welfare

¹⁴ SC Ex. 100 (Baker direct).

¹⁵ CCL Ex. 102 at 618.

¹⁶ 75 Fed. Reg. 6474, 6480 (Feb. 9, 2010).

¹⁷ As the ALJs stated in Order No. 6, there was good cause for Sierra Club's failure to disclose Mr. Baker's name in discovery and allowing him to testify would not unfairly surprise or prejudice the other parties.

effects. CCL also contends that because Sierra Club admitted the CCL Project is fully protective of human health and the environment, Sierra Club has also admitted that Mr. Baker is not an affected person.¹⁸

In addition, CCL asserts that Mr. Baker's own testimony shows that he is not an affected person, because he only generically testified that emissions from the CCL Project would impact his enjoyment of his property. Mr. Baker's statement that he has hay fever and fears that the sneezing may become more frequent is insufficient to show that he could be harmed from emissions from the proposed facility. CCL contends that Mr. Baker's concerns are common to members of the general public in the area surrounding the CCL Project and thus fail to demonstrate that Mr. Baker has a justiciable interest in this proceeding. Because Mr. Baker is not an affected person, CCL argues that Sierra Club does not meet the first prong for associational standing and should be stricken as a party to this matter.

E. OPIC's Position

OPIC points out that Sierra Club was named a party in Order No. 1 and has fully participated in this proceeding. Therefore, in OPIC's opinion, Sierra Club's standing was previously settled in this case.

F. ED's Position

The ED claims that Sierra Club has failed to meet the test for associational standing through its member, Mr. Baker. The ED does not anticipate that, at a distance of 4.5 miles from the CCL Project, there will be any adverse impact from the proposed emissions on Mr. Baker's health or property. He also has no interest different from the general public, in the ED's opinion. Because Mr. Baker is not an affected person under the TCEQ's rules, Sierra Club likewise does

¹⁸ The ALJs further discuss this allegation below.

not have standing because it cannot meet the test for associational standing under 30 Texas Administrative Code § 55.205(a).

G. ALJs' Analysis

After reviewing the evidence, the argument, and the regulations, the ALJs conclude that Sierra Club has met the standard for associational standing under 30 Texas Administrative Code § 55.205(a).

The ALJs conclude that Sierra Club did not lose associational standing simply because Mr. Davidson declined to participate in the evidentiary hearing.¹⁹ The following discussion occurred at the August 15, 2013 preliminary hearing regarding party status:

Mr. Frederick:	Sierra Club is seeking party status, Judge.
Judge Wilfong:	Is there any objection?
Mr. McDonald:	If counsel for Sierra Club could just recite which witnesses are here and what their basic showing would be, there may be no objection to their - -
Judge Wilfong:	Okay
Mr. McDonald:	--to the party status.
Mr. Frederick:	I can do that . . . (he lives) probably less than two miles . . . his enjoyment of his property and his enjoyment of nature near his property will be diminished if there's increase loads of various pollutants There is modeling . . . a greater than de minimus impact from nitrogen oxide emissions at a distance as great, as almost eight miles from the site. So we feel he is suffering differently from the public at large. . . .

¹⁹ Sierra Club does not argue that Mr. Davidson's continued membership is sufficient to meet the first prong of the test for associational standing. 30 Tex. Admin. Code § 55.205(a)(1). After he declined to participate in the hearing, Sierra Club conceded that if it could not present a newly-discovered member who met the definition of an affected person, Sierra Club would lose standing and the case would be remanded to the TCEQ. SC Jan. 25, 2014 Motion for Reconsideration of Order No. 4 at 2. The ALJs disagree with Sierra Club's position.

Judge Wilfong: Mr. McDonald, with those representations of the evidence that would be presented, do you withdraw any objections?

Mr. McDonald: *Yeah, we're not opposed at this time to Sierra Club's admission.*²⁰

CCL did not question Mr. Davidson about whether he was an affected person and did not object to Sierra Club's standing. Accordingly, Sierra Club was granted party status.

At this point, nothing more was necessary from Sierra Club. As OPIC points out, Sierra Club was a party with full rights and responsibilities and participated fully. Nevertheless, Sierra Club named Mr. Davidson as a lay witness to testify at the hearing on the merits "to establish that there is a Club member with interest and potential impacts that the Club may be a party to this proceeding."²¹ In his affidavit explaining why he no longer wanted to participate in this hearing, Mr. Davidson stated that he remained a member of Sierra Club.²²

Moreover, as also demonstrated by his affidavit, he continued to have concerns about the Facility. Nothing had changed regarding his affected person status.²³ The only change is that he was no longer willing to participate in the hearing. However, once Sierra Club was named a party at the preliminary hearing, there was no requirement that Mr. Davidson testify at the hearing on the merits. To be clear, Mr. Davidson did not become a party, Sierra Club did. One of the prongs for associational standing requires that: "neither the claim asserted nor the relief requested requires the participation of the individual members in the case."²⁴ Therefore, Mr. Davidson's participation during the evidentiary hearing was not expected. He had fulfilled his role at the preliminary hearing and was not required to appear at the evidentiary hearing

²⁰ Tr. at 13-14 (emphasis added).

²¹ SC Sep. 24, 2013 Designation of Fact and Expert Witnesses at 1-2.

²² SC Dec. 24, 2013 Motion (Presumptively, Opposed) to Supplement its Witness List at Ex. A (emphasis added).

²³ Mr. Davidson's affidavit is not part of the evidentiary record in this case, but was filed as an attachment to a pleading. Therefore, the ALJs find it relevant to this discussion. Also, there is no evidence in the record that Mr. Davidson is no longer a Sierra Club member or is no longer an affected person, as he was on August 15, 2013.

²⁴ 30 Tex. Admin. Code § 55.205(c)(3).

unless he was subpoenaed. Moreover, CCL had not even sought to depose him. As stated by OPIC, the matter of Sierra Club's standing was settled in this case. The ALJs conclude that because Mr. Davidson remained a member of Sierra Club and CCL acquiesced at the preliminary hearing that he was affected, Sierra Club did not lose its associational standing simply because Mr. Davidson did not wish to testify at the hearing on the merits.

Regarding Mr. Baker's status as an affected person, the ALJs are likewise convinced that, at the time of the preliminary hearing, he was a member of Sierra Club and an affected person. Therefore, Sierra Club also meets the first prong of the associational standing test based on his membership. His interests are identical to Mr. Davidson's: they both live or work near the proposed CCL Project and they both have concerns for their health and enjoyment of their property. CCL did not question Mr. Davidson's status as an affected person at the preliminary hearing, and given the similarities in interests between the two members, the ALJs are surprised CCL now challenges whether Mr. Baker is an affected person.

As pointed out by Sierra Club, Mr. Baker lives and works within the ROI CCL modeled for NO₂. Sierra Club demonstrated that NO₂ is a harmful pollutant and that epidemiologic studies provide little evidence of any threshold effect below which adverse health effects have been shown not to occur.²⁵ Rather, in studies that have evaluated concentration-responses, they appear linear. In addition, CCL's modeling shows that NO₂ impacts exceed the SIL. Although this may only indicate that a full impacts analysis is necessary, it does show a raised potential for impacts.

Given the location of his home and place of employment and his concerns, Mr. Baker has a personal justiciable interest, an interest not common to members of the general public.²⁶ Although both the ED and CCL argue that Mr. Baker's interests are common to members of the general public, the general public does not work next door to the proposed Facility. Those

²⁵ 75 Fed. Reg. 6474, 6480 (Feb. 9, 2010).

²⁶ 30 Tex. Admin. Code § 55.203(a).

arguments fail to take into account the unique situation of Mr. Baker's daily activities that elevate his interests from "common" to "personal." The ALJs conclude that there is a reasonable relationship between the interests claimed by Mr. Baker and the CCL Project, as well as a likely impact of the regulated activity on the health and safety of Mr. Baker and on the use of his property.

CCL maintains that the modeling and toxicology evidence produced at the hearing on the merits demonstrates that Mr. Baker will not be affected by the emissions from the CCL Project.²⁷ However, CCL did not offer this evidence at the preliminary hearing and it was not available to the ALJs at that time. Reviewing this type of evidence at the preliminary hearing harks back to the days of *Mitsui*, where evidence would be offered by both sides in order to address party status with preliminary hearings oftentimes taking a full day.²⁸ Furthermore, taking CCL's analysis to its obvious conclusions, no person would be an affected person if the applicant prevailed at the hearing on the merits and showed that the permit should be issued. In fact, in such situations it could even be argued that the decision to grant party status at the time of the preliminary hearing was made in error.

CCL's ultimate outcome-based determination is not the test to determine standing and case law is long and sufficient in rejecting such a review. As stated in *Heat*, the standard for standing "does not require parties to show they will ultimately prevail in their lawsuits; it requires them to show only that they will potentially suffer harm or have a 'justiciable interest' related to the proceedings."²⁹ Moreover, the *Heat* court noted that a party does not have to prove the merits of its case in order to demonstrate that it has standing to participate in the proceeding.³⁰ *Grissom* likewise held that the preliminary question of standing should not be

²⁷ CCL relies on the testimony at the hearing on the merits of its toxicologist, Thomas M. Dydek, Ph.D., D.A.B.T., P.E., and TCEQ senior toxicologist, Tiffany G. Bredfeldt, Ph.D., for the proposition that based on their analyses, adverse health effects are not expected to occur from emissions from the CCL Project.

²⁸ *Mitsui, San Antonio Components, Inc. Request for Permit No. 30979*, SOAH Docket No. 582-96-0956.

²⁹ *Heat*, 962 S.W.2d at 295

³⁰ *Id.*

confused with whether the party will win the contested case on the merits.³¹ Therefore, the ALJs do not recommend that the Commission rely on the evidence offered during the evidentiary hearing to determine whether Mr. Baker is an affected person, a decision appropriately made at the time of the preliminary hearing.

However, two recent cases from the Third Court of Appeals could be construed to support CCL's reliance on the evidence proving up the merits of the case to determine party status: *Sierra Club v. Texas Commission on Environmental Quality (Waste Control Specialists I)*³² and *Texas Commission on Environmental Quality v. Sierra Club (Waste Control Specialists II)*.³³ Both opinions affirmed the Commission's decisions to deny the hearing requests, decisions that relied on reviews of the administrative records as they existed at the time of the decisions. When the decisions were made, the administrative records included the applications, draft permits, and environmental analyses. In this case, CCL urges the Commission to rely on this same type of information and conclude that Mr. Baker is not an affected person.

At first glance, *Waste Control Specialists I and II* may seem to require consideration of the evidence obtained during the hearing on the merits to make an affected person determination. This would be a significant change in precedent because party status is typically made on a much leaner evidentiary record developed at the preliminary hearing. It has been common for applicants to even waive objections to party status, as was done by CCL in this case at the preliminary hearing.

However, the procedural posture of *Waste Control Specialists I and II* is very different from the case at hand. *Waste Control Specialists I and II* concerned the Commission's denial of hearing requests without an evidentiary hearing. Therefore, as found by the court of appeals, it

³¹ *Grissom*, 17 S.W.3d at 903.

³² No. 03-11-000102-CV, 2014 Tex. App. LEXIS 3661 (Tex. App.—Austin Apr. 4, 2014, n.w.h.)

³³ No. 03-12-00335-CV, 2014 Tex. App. LEXIS 4232 (Tex. App.—Austin Apr. 18, 2014, n.w.h.).

was proper for the Commission to rely on the administrative record as it existed at the time of the Commission's decision.

In this case, CCL directly referred the case to SOAH,³⁴ and the ALJ convened a preliminary hearing to take evidence on the issue of Sierra Club's party status. This case is more akin to *Heat* and *Grissom*, cases in which preliminary hearings were held and evidence taken on the sole issue of whether an association's member was an affected person.

In *Grissom*, the court of appeals considered both the unique health concerns and the proximity to the facility's location in determining that the person's interests were elevated above that of the general public and that he was "more likely than other members of the general public to be adversely affected by the facility."³⁵ As in *Grissom*, CCL appears to confuse the preliminary question of whether an individual has standing as an affected person with the ultimate question of whether that person will prevail in a contested-case hearing on the merits. Under the standard set forth in *Grissom*, Mr. Baker does not have to conclusively prove that his health, safety, and property will be affected. He need only indicate that the potential exists that he will be affected by the proposed project.

In his testimony, Mr. Baker raised specific concerns about the possible negative impacts that the proposed plant could have on his health and property interests. These concerns are similar to the concerns expressed by the protestant in *Grissom*, whose health concern was asthma, a particularly common health concern. Although neither asthma nor hay fever are unique in nature, given that they affect many members of the general public, they become unique when applied to persons, like Mr. Baker, whose location makes them more likely to be impacted than the general public. Also, in *Heat*, the court found that an individual's locational features,

³⁴ See 30 Tex. Admin. Code § 55.210.

³⁵ *Grissom*, 17 S.W.3d at 803.

such as working or living in proximity to the proposed facility, distinguish an individual from members of the general public in considering affected person status.³⁶

Furthermore, given the unique nature of this proceeding in that standing issues arose so late in the process, it would be incorrect to rely on the evidence admitted during the hearing on the merits to make a decision typically and originally made at the preliminary hearing. When Sierra Club sought to amend its witness list to replace Mr. Davidson with Mr. Baker, the ALJs required Sierra Club to show that Mr. Baker's membership and affected person status relate back to the time of the preliminary hearing. The ALJs deemed this necessary so that Sierra Club did not attempt to prove associational standing with a person who became a member after the preliminary hearing. In addition to being contrary to the holdings in *Heat* and *Grissom*, it would be inconsistent to allow CCL to disprove party status based on evidence produced at the hearing on the merits when Sierra Club was required to prove associational standing at the time of the preliminary hearing.

Assuming we can look to the evidence presented at the hearing on the merits, CCL concedes that Mr. Baker lives and works within the ROI used to model the one-hour concentrations and works within the ROI used to model for annual NO₂ concentrations.³⁷ Further, CCL's modeling shows that NO₂ concentrations will exceed the respective *de minimis* concentrations, requiring a full impacts analysis,³⁸ and Sierra Club has provided evidence showing that there is no threshold limit below which adverse NO₂ health effects have been shown not to occur. Given that Sierra Club is not required to disprove the final conclusions of CCL's modeling to prove standing, the ALJs conclude that Sierra Club has shown that Mr. Baker was an affected person as of August 15, 2013, the date of the preliminary hearing, and that Sierra Club remains a proper party to this case.

³⁶ *Heat*, 962 S.W.2d at 295.

³⁷ CCL Reply Brief at 2.

³⁸ ED Ex. 31 at 972-73 (Jamieson direct).

Finally, the ALJs also disagree with CCL that Sierra Club admitted it does not have a member who is an affected person. Sierra Club agreed not to contest that the CCL Project is fully protective of human health and physical property, and CCL claims that Sierra Club is essentially admitting that it does not have an affected person for party status. The ALJs find CCL's interpretation of Sierra Club's statements go beyond the original intent of the discussion:

Judge Qualtrough: And I understand there were – you were not – the Sierra Club was not going to contest certain issues. Is that correct?

Mr. Matthews: We won't be contesting –

Mr. Frederick: Yes. The position -- Sierra Club is not going to contest issues other than the fugitives issue that is live for hearing.

Judge Qualtrough: Okay.

Mr. Frederick: And then we are going to brief, in probably some other perfunctory way, the redesigning source issue for the electric compressors.³⁹

This line of discussion indicates that Sierra Club was limiting the issues at hearing and shortening the hearing process, not admitting that Mr. Baker is not affected. Moreover, in order to complete the bigger picture of what was happening in this proceeding, Sierra Club's primary issue with this Application was stricken from consideration by the ALJs in Order No. 7. In that order, the ALJs ruled that requiring electric motors rather than gas-turbine-driven compression was "redesigning the source" and is not properly considered under the BACT standard. Given this ruling, much of Sierra Club's prefiled testimony regarding the use of electric motors to drive compression was stricken from the record as not relevant. The ALJs do not recommend in this instance that Sierra Club's party status be determined by the ALJs' ruling or Sierra Club's agreement not to contest issues such as modeling. As shown by their reasoning in this PFD, the ALJs find that Sierra Club has proper standing as a party in this case.

³⁹ Tr. at 206-07. The ALJs struck much if not most of Sierra Club's prefiled testimony as it related to redesigning the compressors from gas- to electrically-driven compression, an issue the ALJs found is beyond BACT.

IV. BACT

A. New Source Review Permits – Statutory and Regulatory Requirements

The TCAA⁴⁰ grants the Commission authority to issue a permit to construct a new facility that may emit air contaminants.⁴¹ The TCAA defines a facility as a “discrete or identifiable structure, device, item, equipment, or enclosure that constitutes or contains a stationary source, including appurtenances other than emission control equipment. A mine, quarry, well test, or road is not considered to be a facility.”⁴² Before issuing a permit for a facility, the TCAA requires the Commission to find that the facility “will use at least the best available control technology, considering the technical practicability and economic reasonableness of reducing or eliminating the emissions resulting from the facility”⁴³ Under the TCAA, a project that meets the applicable requirements is entitled to an air quality permit.⁴⁴

The TCEQ defines BACT as:

[A]n air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practicable and economically reasonable for the facility. The emissions reduction can be achieved through technology . . . or by enforceable changes in *production processes*, systems, methods, or work practice.⁴⁵

⁴⁰ Tex. Health & Safety Code ch. 382.

⁴¹ Tex. Health & Safety Code § 382.051(a)(1).

⁴² Tex. Health & Safety Code § 382.003(6); *see also* 30 Tex. Admin. Code § 116.10(4).

⁴³ Tex. Health & Safety Code § 382.0518(b)(1).

⁴⁴ Tex. Health & Safety Code § 382.0518(b).

⁴⁵ 30 Tex. Admin. Code § 116.10(1) (emphasis added).

In addition, EPA's BACT definition provides:

Best available control technology (BACT) means an emissions limitation . . . based on the maximum degree of reduction for each regulated NSR pollutant which would be emitted from any proposed major stationary source . . . which the reviewing authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source . . . through *application of production processes* or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. . . .⁴⁶

As explained by the TCEQ's Air Permit Reviewer Reference Guide (APDG 6110), the TCEQ uses a tiered approach in making its BACT analysis.⁴⁷ In the analysis for each tier, BACT is evaluated on a case-by-case basis for technical practicability and economic reasonableness. A Tier I evaluation involves a comparison of an applicant's BACT proposal to the emission reduction performance levels that have been accepted as BACT in recent permit reviews involving the same process or industry. Under Tier I, an evaluation of new technical developments may also be necessary. A Tier II evaluation involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry if BACT requirements have not been established for a particular process or industry. A Tier III evaluation is done if the first two tiers fail to identify an emission reduction option that is technically practicable and economically feasible. Tier III involves a detailed technical and quantitative economic analysis of all emission reduction options available for the process under review.⁴⁸

In contrast, EPA uses a "top-down" approach for a BACT analysis, as described in its 1990 draft of the New Source Review Workshop Manual.⁴⁹ The top-down approach requires the

⁴⁶ 40 CFR § 51.165(a)(1)(xl) (emphasis added); *see also* 30 Tex. Admin. Code § 116.160 incorporating by reference 40 CFR § 52.21(b)(12).

⁴⁷ ED Ex. 4.

⁴⁸ ED Ex. 4 at 82-83.

⁴⁹ ED Ex. 5.

following steps: (1) identify all potential control technologies; (2) eliminate technically infeasible options; (3) rank remaining control technologies by control effectiveness; (4) evaluate the most effective controls and document the results; and (5) select BACT by choosing the best technology not eliminated in the previous step.⁵⁰ EPA has agreed that the TCEQ's tiered-approach is equivalent to its top-down approach.⁵¹

B. CCL's Proposed Facility and Emission Controls

CCL proposes to construct an LNG terminal that will operate three ConocoPhillips Optimized Cascade[®] Process liquefaction trains continuously (8,760 hours per year) using 18 efficient GE LM2500+G4 Single Annular Combustor (SAC) natural gas-fired turbines, six on each train. The natural gas-fired turbines will be used to drive compressors, which compress refrigerants in a cycle that results in the cooling of treated natural gas to approximately -260°F, at which point it becomes LNG. Two turbines in each train will drive propane refrigeration compressor sets, two turbines will drive ethylene refrigeration compressor sets, and two turbines will drive methane refrigeration compressor sets.⁵²

For each train, 14 centrifugal compressors will be required to operate in concert with one another and with other pieces of equipment to produce LNG. All 14 compressors are linked together through a system of heat exchangers, pressure vessels, piping, valves, and other equipment in a process that feeds each other at various pressures, temperatures, and flows.⁵³

CCL proposes to employ emission control devices and techniques to reduce emissions from the CCL Project. Specifically, CCL will use water injection and good combustion practices to control NO_x from the gas-fired turbines; good combustion practices to control CO from the

⁵⁰ ED Ex. 5 at 202-04.

⁵¹ ED Ex. 1 at 11 (O'Brien direct).

⁵² CCL Ex. 300 at 4 (Lehotsky direct).

⁵³ CCL Ex. 300 at 4 (Lehotsky direct).

turbines; good combustion practices and pipeline-quality natural gas to control particulate matter, sulfur dioxide, and hydrogen sulfide from the turbines; thermal oxidizers to control VOCs and hydrogen sulfide; low NO_x burners, good combustion practices, and a minimum operating temperature for thermal oxidizer control; meeting 40 CFR § 60.18 to control emissions from the flares during normal maintenance, startup, and shutdown activities operations; various tank control measures; submerged fill loading with dedicated normal service to control VOCs from truck loading operations; compliance with 40 CFR Part 60, Subpart III, limited hours of operation, and ultra-low sulfur diesel fuel for the standby generators and firewater pumps; and TCEQ's 28VHP Leak Detection and Repair (LDAR) monitoring program for VOC fugitive emissions.⁵⁴

C. BACT Issues in this Proceeding

The issues regarding whether the CCL Project will utilize BACT to control emissions are limited to two concerns.⁵⁵ First, Sierra Club claims that as part of the BACT analysis, CCL and the ED should have considered the use of electrically-driven compression instead of natural-gas turbines to reduce emissions from the CCL Project. Second, Sierra Club argues that the use of leakless components at the CCL Project or a more stringent LDAR program is BACT for the control of VOC fugitive emissions. For these two reasons, Sierra Club contends that the ED's and CCL's BACT analyses are deficient. All other BACT determinations are uncontested,⁵⁶ and the ALJs find that all emission limits are supported by the evidence.

⁵⁴ CCL Ex. 200 at 58-59 (Ryan direct).

⁵⁵ Tr. at 206-07.

⁵⁶ Sierra Club prefiled evidence that NO_x emissions could be reduced with the use of selective catalytic reduction; however, it withdrew its evidence and no longer contests this issue. Tr. at 12-13, 154.

D. Natural Gas-Fired Turbines v. Electric Motors

CCL proposes to use 18 natural gas-fired turbines to provide the mechanical power for the compressors in the three liquefaction trains. Sierra Club does not challenge the technologies to control emissions from those gas-fired turbines. However, Sierra Club asserts that the BACT analysis should have required consideration of the use of electric motors, instead of the gas-fired turbines, as a production process to reduce emissions as required by the BACT definition.

In support of its position, Sierra Club offered prefiled evidence from William Powers. On January 17, 2014, CCL and the ED objected to this evidence asserting that it was not relevant to this proceeding. According to these parties, Sierra Club was impermissibly attempting to redefine the source of emissions through the BACT analysis; therefore, Sierra Club's evidence was not relevant. The ALJs agreed with CCL and the ED and excluded Sierra Club's prefiled evidence on this issue.⁵⁷

At the evidentiary hearing, the ALJs re-affirmed this ruling, but determined that although not relevant to the issue of whether the BACT analysis was sufficient, Sierra Club's evidence would be relevant to challenge the accuracy of CCL's expert testimony on electrically-driven compression. Therefore, CCL and Sierra Club agreed to withdraw the evidence on the use of electric motors, but both parties made an offer of proof to allow for the review of the ALJs' evidentiary rulings.⁵⁸ To assist the Commission, the ALJs will discuss the parties' arguments and the ALJs' analysis of this issue.

⁵⁷ SOAH Order No. 7 (Jan. 30, 2014).

⁵⁸ The following evidence is the subject of CCL's offer of proof: CCL Ex. 100 at 17:14-16, 17:23-24, 18:27-29 (Chartrand direct); CCL Ex. 200 at 34:29-39, 39:24-29, 51:13-19 (Ryan direct); CCL Ex. 300 at 21:25-29 (Lehotsky direct); and CCL Ex. 400 at 10:11-22, 23:34-39 (Campbell direct). Tr. at 28-40. The following evidence is the subject of Sierra Club's offer of proof: SC Ex. 400 at 6:10-12, 14:6-9 (Powers direct); SC Exs. 402-409; and SC Ex. 419 (those portions discussing electrically-driven compression). Tr. at 148-56.

1. Sierra Club's Position

As previously stated, CCL proposes to use 18 natural gas turbines to power the compressors in the three liquefaction trains. Sierra Club asserts that replacing these gas-fired turbines with electric motors would eliminate the primary source of emissions. CCL and the ED maintain that requiring the use of electric motors through the BACT process equates to a redefinition of the source.

Sierra Club recognizes that Texas and federal authorities have held that a BACT analysis does not require the consideration of controls that would “redefine” or “redesign” the source to something other than what was proposed.⁵⁹ However, Sierra Club asserts that a proper BACT analysis requires the TCEQ to take “a ‘hard look’ . . . to discern which design elements are inherent for [CCL’s] purpose and which design elements ‘may be changed to achieve pollutant emissions reductions without disrupting [CCL’s] basic business purpose for the proposed facility’”⁶⁰ It is Sierra Club’s position that the ED determined that any process change would equate to a redefinition of the source, though he made that determination without looking at the specific facts of CCL’s Application. However, Sierra Club contends both state and federal law require a case-by-case analysis, and rejection of electrically-driven compression as a production process must be based on evidence that electric motors would be inconsistent with the CCL Project’s fundamental purpose or basic definition.

Furthermore, Sierra Club claims that some redesign of a source may be necessitated by a proper BACT analysis. For example, the ED required the analysis of selective catalytic reduction (SCR) to reduce NO_x emissions as part of BACT, and the use of such technology could have potentially required some change to the Facility’s design. According to Sierra Club, the ED

⁵⁹ *Sierra Club v. EPA*, 499 F.3d 653, 655-56 (7th Cir. 2007); *Blue Skies Alliance v. Texas Comm’n on Env’tl Quality*, 283 S.W.3d 525, 536 (Tex. App.—Amarillo 2009, no pet.).

⁶⁰ *In re Desert Rock Energy Company, LLC*, 2009 EPA App. LEXIS 28, 120-21 (EAB Sept. 24, 2009) (quoting *In re Prairie State Generating Co.*, 2006 EPA App. LEXIS 38 (EAB Aug. 24, 2006)).

did not explain how a design change to accommodate the use of SCR is different from a design change to accommodate the use of electric motors.

Sierra Club further contends that changes in “production processes,” such as the use of electric motors, are contemplated by the statutes and regulations defining BACT. For example, in EPA’s top-down approach, inherently lower-emitting process and practices are considered in Step 1,⁶¹ and electric motors would be such a lower-emitting process. The TCEQ must give effect to every word in the BACT definition, and Sierra Club maintains that if every change to a production process equates to a redesign of the source, then the term “production process” in the BACT definition would be surplusage.

2. CCL’s Position

According to CCL, the starting place for any BACT analysis, regardless of whether using EPA’s top-down approach or the TCEQ’s tiered approach, is the facility proposed by the applicant for the permit. CCL asserts that the fundamental principle is that permitting authorities cannot “redefine the source” that has been proposed by an applicant as part of the BACT analysis.

CCL claims that Sierra Club is attempting to expand the scope of the BACT review, and this expansion has been rejected by both the regulatory agencies and the courts. In *Sierra Club v. EPA*,⁶² EPA’s BACT analysis was proper because it did not require a mine-mouth facility to use coal with a lower-sulfur content as an alternative to the high-sulfur coal proposed in the application. In *Blue Skies Alliance v. Texas Commission on Environmental Quality*,⁶³ the TCEQ similarly rejected the need to evaluate the use of integrated gasification combined cycle (IGCC) at the Sandy Creek Energy Center, a facility proposing to use pulverized coal boilers in the

⁶¹ ED Ex. 5 at 207.

⁶² 499 F.3d 653, 655-56 (7th Cir. 2007).

⁶³ 283 S.W.3d 525, 535 (Tex. App.—Amarillo 2009, no pet.).

generation of electricity. Both agency determinations limited the scope of the BACT analysis to the facility as proposed by the applicant, and this fundamental regulatory principle was upheld by the courts.

CCL maintains that both its and the ED's BACT reviews were properly based on the proposed CCL Project as designed to include three ConocoPhillips Optimized Cascade[®] Process LNG liquefaction trains, each with six GE LM2500+G4 SAC turbines. According to CCL's witness, Edward Lehotsky, this specific design is optimal for the CCL Project, based on the fundamental purpose and objectives of the Facility. Mr. Lehotsky testified that only this LNG process has a successful track record of using aeroderivative gas-fired turbines, which are more fuel efficient than the industrial heavy-duty gas-fired turbines used in other processes.⁶⁴ He also stated, "[t]he design provides a wide range of production rates because of the 2+2+2 refrigerant compressor configuration. For example, [CCL] can run only half the compressors very efficiently if market demands require a temporary reduction in LNG production."⁶⁵ In addition, by using gas-fired turbines, CCL can maintain the refrigerants in storage under pressure, without having to vent or flare during shutdowns of the LNG trains.⁶⁶ Mr. Lehotsky also stated that in using the gas-fired turbines:

[CCL] can take advantage of a standardized, proven "template" design developed by ConocoPhillips and [CCL's] contractor Bechtel. This design has been well proven, fits the limited area available at the CCL Project Site, produces about 4.5 million tons of LNG per year (which matches CCL's marketing plans), reduces engineering, construction, and maintenance costs, and duplicates the design being used by CCL's affiliated company at the Sabine Pass Liquefaction (SPL) project (as well as at other similar plants currently operating and under construction outside the United States).⁶⁷

⁶⁴ CCL Ex. 300 at 4 (Lehotsky direct).

⁶⁵ CCL Ex. 300 at 4 (Lehotsky direct).

⁶⁶ CCL Ex. 300 at 4 (Lehotsky direct).

⁶⁷ CCL Ex. 300 at 4 (Lehotsky direct).

Mr. Lehotsky further testified that driver selection is an integral part of the CCL design, and stated:

In any refrigeration service, a certain amount of power is required to compress enough refrigerant to cool or liquefy your product. Given the LNG process selected, the amount of LNG we wanted to produce, the expected feed gas compositions and delivery pressures at the site, the historical ambient temperatures, the size of the site, the fuel efficiencies and reliabilities required, environmental considerations, and other influencing factors, we selected the LM2500+G4 SAC as the best fit.⁶⁸

CCL contends that this evidence demonstrates the fundamental purposes and objectives of CCL's proposed design using gas-fired turbines. Therefore, the BACT analysis should not consider drivers other than the highly-efficient gas-fired turbines that drive the required compressors because this would require a fundamental redesign of the proposed CCL Project.⁶⁹ According to CCL, Sierra Club is not proposing control technologies that can be applied to CCL's proposed turbines, but it wants to eliminate the proposed turbines and replace them with electric motors, which is beyond the scope of the BACT review.

3. OPIC's Position

OPIC did not take a position on this issue given the ALJs' exclusion of the evidence on electrically-driven compression on the basis that such evidence was not relevant.

4. ED's Position

The ED argues that the ALJs' exclusion of evidence on electrically-driven compression was proper because such evidence is not relevant to the BACT analysis. According to the ED, it has been EPA's longstanding policy that a BACT analysis is not used to fundamentally redefine

⁶⁸ CCL Ex. 300 at 18 (Lehotsky direct).

⁶⁹ CCL Closing at 17.

a proposed source,⁷⁰ and that the ED has followed that interpretation in performing his BACT reviews. The ED cites to the TCAA, which provides that the Commission must grant a permit for “the proposed facility [if it] will use at least the best available control technology, considering the technical practicability and economic reasonableness of reducing or eliminating the emissions resulting from the facility”⁷¹ This statutory framework requires a case-by-case review of a proposed facility, and the review must include the source proposed by the applicant. Otherwise, a permitting agency could potentially intrude on the applicant’s business decisions. As an example, the ED cites to a proposal to construct a coal-fired power plant. Although a natural gas-fired turbine may be an inherently lower-polluting process, the BACT analysis does not consider such an alternative because that would result in a redefinition of the design of the applicant’s proposed coal-fired plant.⁷²

5. ALJs’ Analysis

The ALJs agree with CCL and the ED that requiring the consideration and implementation of electrically-driven compression as a control technology through the BACT review would result in the impermissible redefinition of the source of emissions proposed by CCL. This issue was clearly determined in *Blue Skies Alliance*. That case involved the Sandy Creek Energy Center, a power plant that proposed to use pulverized coal in the generation of electricity. In response to a certified question, the TCEQ determined that the BACT analysis did not require consideration of the use of IGCC as an alternative to pulverized coal. On appeal, the Seventh Court of Appeals affirmed the TCEQ determination and held:

BACT requires that those production processes, methods, systems, and techniques (control technologies) that will achieve the maximum reduction of regulated pollutants be applied to any proposed major stationary source. We believe that

⁷⁰ ED Ex. 5 at 210 (EPA New Source Review Workshop Manual, (October 1990)); *see also Sierra Club v. EPA*, 499 F.3d at 655-56.

⁷¹ Tex. Health & Safety Code § 382.0518(b).

⁷² ED Closing at 4, citing ED Ex. 5 at 210 (EPA New Source Review Workshop Manual).

the BACT definition clearly provides that only those control technologies that can be **applied** to the **proposed** major source be considered in the BACT analysis. Thus, the only control technologies that must be considered in a BACT analysis are those control technologies that can be incorporated into or added to the facility as proposed by the applicant.⁷³

In the ALJs' opinion, the use of electrically-driven compression is not a production process that can be applied to the source proposed by CCL; it is a complete replacement of the emission source itself. Here, Sierra Club is arguing that electric motors should be considered as BACT that must replace the proposed gas-fired turbines. However, *Blue Skies Alliance* rejected that argument in the context of using IGCC to replace pulverized coal in the production of electricity. Furthermore, in the ALJs' opinion, requiring CCL to prove that electrically-driven compression is inconsistent with its fundamental purpose or basic design as advocated by Sierra Club misreads the holding in *Blue Skies Alliance*. The issue in this case is not whether electrically-driven compression is inconsistent with CCL's fundamental purpose or basic design, but whether it is a control technology that can be applied to the CCL Project as proposed. Clearly, electrically-driven compression cannot be applied to CCL's proposed Facility; it can only be substituted for the proposed gas-fired turbines, and *Blue Skies Alliance* compels the ALJs to reject Sierra Club's position.

Nor are the ALJs persuaded by Sierra Club's argument that a line of Environmental Appeals Board (EAB) cases⁷⁴ require the consideration of electric motors as part of the "hard look" the TCEQ must make in its BACT analysis. All three EAB cases recognized the fundamental "redefinition of the source" principle at issue here, but all three cases are easily distinguishable from this case. In *Desert Rock*, the applicant had considered the use of IGCC as

⁷³ *Blue Skies Alliance*, 283 S.W.3d at 535 (emphasis in orig.).

⁷⁴ *In the Matter of Hibbing Taconite Co.*, 1989 EPA App. LEXIS 24 (July. 19, 1989) (no redefinition of the source when applicant sought to switch fuels to burn pet coke at an existing plant that currently burned natural gas); *In Re: Desert Rock Energy Co. LLC*, 2009 EPA App. LEXIS 28 (Sep. 24, 2009) (no redefinition of the source when applicant had considered and rejected IGCC as part of its business objectives); *In re Northern Mich. Univ. Ripley Heating Plant*, 2009 EPA App. LEXIS 5 (Feb. 18, 2009) (no design change required for a coal-burning facility to burn lower sulfur coal).

part of its business objective; therefore, considering IGCC through the BACT process was proper. In *Hibbing Taconite*, the facility in that case was already equipped to burn natural gas, and consideration of natural gas as an alternative fuel was not a redefinition of the source. In *Northern Michigan University*, the EAB reviewed the administrative record and found that it failed to demonstrate how using coal from different sources would result in a fundamental change in the proposed source of emissions. But most importantly, the EAB noted in its discussion that “[p]roposed coal-fired electrical generators need not consider a natural gas turbine,” which is analogous to Sierra Club’s position in this case.⁷⁵ For these reasons, the ALJs conclude that the EAB cases cited by Sierra Club support the conclusion that requiring the BACT analysis for the CCL Project to consider electrically-driven compression would amount to a redefinition of the source.

Further, there is ample evidence demonstrating that gas-fired turbines are in fact fundamental to the CCL project and its basic design as CCL considered a number of factors in reaching its business decision to utilize the gas-fired turbines at this Facility. Only the proposed LNG process has a successful track record of using aeroderivative gas-fired turbines, and these turbines are more fuel efficient than other gas-fired turbines.⁷⁶ The 2+2+2 refrigerant compressor configuration provides a wide range of production rates, and CCL can efficiently run half the compressors to adjust to reductions in market demand.⁷⁷ Also, the use of gas-fired turbines allows CCL to maintain the refrigerants in storage under pressure, without having to vent or flare during shutdowns of the LNG trains.⁷⁸ The design developed by ConocoPhillips and Bechtel is a proven design, fits the limited area available at the CCL Project site, produces about 4.5 million tonnes of LNG per year, thereby meeting CCL’s marketing plans, reduces engineering, construction, and maintenance costs, and duplicates the design being used by CCL’s

⁷⁵ *Northern Mich. Univ.*, 2009 EPA App. LEXIS at 49-50.

⁷⁶ CCL Ex. 300 at 4 (Lehotsky direct).

⁷⁷ CCL Ex. 300 at 4 (Lehotsky direct).

⁷⁸ CCL Ex. 300 at 4 (Lehotsky direct).

affiliate at the Sabine Pass Liquefaction project.⁷⁹ CCL selected the LM2500+G4 SAC because it is the best fit for its business purpose, given the LNG process selected, the amount of LNG CCL wants to produce, the expected feed gas compositions and delivery pressures at the site, the historical ambient temperatures, the size of the site, the fuel efficiencies and reliabilities required, environmental considerations, and other influencing factors.⁸⁰ This evidence amply demonstrates that the gas-fired turbines are essential to meet CCL's fundamental purpose and basic design of its proposed Facility.

For the reasons stated in this PFD, the ALJs conclude that the BACT analysis does not require the consideration of electrically-driven compression. Requiring the consideration of electric motors as part of the BACT analysis would re-design CCL's proposed source.

E. Fugitive Emissions

The second BACT dispute focuses on VOC emissions from piping and equipment, also known as fugitive emissions. The ED and CCL assert that the 28VHP LDAR program is BACT for these fugitive emissions, but Sierra Club disagrees. CCL estimates that the LDAR program will control VOC emissions to 6.78 lbs/hr.⁸¹

1. Sierra Club's Position

Sierra Club argues that a proper BACT analysis would have required the use of leakless components or a more stringent LDAR program. Sierra Club points out that the proposed CCL Project will emit fugitive VOCs, which are ozone precursors, and the ED's determination that the 28VHP LDAR program is BACT for fugitive emissions relies on a standard that has not been

⁷⁹ CCL Ex. 300 at 4 (Lehotsky direct).

⁸⁰ CCL Ex. 300 at 18 (Lehotsky direct).

⁸¹ CCL Ex. 200 at 57 (Ryan direct).

updated in 13 years.⁸² Therefore, it is Sierra Club's position that the BACT analysis for fugitive emissions in this case is deficient.

According to Sierra Club, both TCEQ and EPA use the term "leakless components" to refer to components such as connectors, valves, and pumps that are designed to eliminate or significantly reduce fugitive emissions.⁸³ TCEQ's guidance for fugitive emissions states that components "designed to be 'leakless' . . . can be given 100% control,"⁸⁴ and as such, TCEQ exempts such equipment from monitoring requirements. Sierra Club maintains that the ED should have required leakless components as part of his BACT analysis instead of relying on a 13-year-old standard.

Sierra Club further argues that requiring leakless components through the BACT analysis is not a redefinition of a source. Any change to a production process, even replacing a single flange with a welded connection, does not equate to a redesign of the project. To hold otherwise would improperly read the term "production processes" out of the BACT definition. Furthermore, Sierra Club contends that it is not necessary that leakless components be used universally throughout the Facility; it is sufficient if the BACT analysis considers whether it is possible to replace a subset of the leaking components with the leakless variety.

Sierra Club also urges the rejection of CCL's explanation that it has a financial incentive to reduce fugitive emissions as much possible because a financial incentive is not a sufficient justification to ignore the use of leakless components as part of a BACT analysis.⁸⁵ The TCEQ's 28LAER program is a more stringent leak detection standard than the 28VHP program required for the CCL Project as BACT, and the more stringent program should result in lower fugitive

⁸² ED Ex. 16; Tr. at 192 (O'Brien cross).

⁸³ ED Ex. 16 at 781-84 (TCEQ's Air Permit Technical Guidance for Chemical Sources: Equipment Leak Fugitives); SC Ex. 431 at 11512 (EPA, *Leak Detection and Repair: A Best Practices Guide*).

⁸⁴ ED Ex. 16 at 781 (referring to pumps).

⁸⁵ Tr. at 71-73 (Lehotsky redirect), 82-83 (Campbell redirect).

emissions, thereby increasing profits. However, CCL has not adopted the more stringent program that should result in lower fugitive emissions, which would demonstrate, in Sierra Club's opinion, that CCL does not have a profit incentive to reduce fugitive emissions.

As an alternative to leakless components or where leakless components cannot be used, Sierra Club contends that the BACT analysis should have considered whether the more stringent 28LAER LDAR program is BACT for this Facility. Instead, the ED's BACT analysis accepted a 13-year-old standard as BACT instead of inquiring whether changed technology or circumstances have occurred that eliminated the 28VHP LDAR program as BACT.

2. CCL's Position

CCL maintains that the LDAR program utilized for the CCL Project is based on many years of developing a standardized set of LDAR programs that are BACT. Guidance on this issue is well established, and BACT for fugitive emissions in this context is the 28VHP LDAR program. Although recommended in the TCEQ's Guidance in 2000, this program remains BACT for fugitive emissions according to the August 2011 TCEQ guidance.⁸⁶

According to CCL, leakless components, as proposed by Sierra Club, are already utilized throughout much of the CCL Project. On the subject of using leakless components in the design of the piping at the Facility, Mr. Lehotsky testified:

We make sure that the design has as few flanges, for example, as possible. We use welds wherever possible. Only when we can't get away with it do we have to use flanges; that we do – almost all our valves, for example, are welded in. We also, when we have to have flanges or seals or valve packing, use the best technology that's available. We use other components like that just basically to minimize it. We do that mostly for safety purposes. We don't – for example, natural gas is odorless. Although we have gas detectors strategically located

⁸⁶ Tr. at 179 (O'Brien cross); CCL Ex. 200 at 56 (Ryan direct); *see also* CCL Ex. 215 (TCEQ Guidance on Fugitives).

throughout the plant, we still want to minimize the chance of those leaks happening. So we make sure that all our – for example, our gaskets are spiral weld, either graphite or Teflon. We'll have double seals on several of our valve packings, things like that.⁸⁷

Mr. Lehotsky also testified that he did not think it would be prudent to use leakless components throughout the entire CCL Project, stating:

I don't even know what a leakless component is. Components will leak. We basically minimize the number of components that could have leaks, but you still need a valve. You still need to be able to turn that actuator or that shaft on that valve. You can't help that. You still have to, some places, make connections using flanges because you have to get inside to maintain these things and you don't want to have to, for example, cut the pipe every time you want to maintain something. So we absolutely minimize the number of those occurrences, but where we do have them, we make sure that they're [the] best we can have.⁸⁸

It is CCL's position that it has minimized leaks from the CCL Project as part of its design, but requiring a totally "leakless" facility is not feasible and not part of the BACT analysis.

CCL also takes issue with Sierra Club's assertion that a more stringent LDAR program should be required for the CCL Facility. CCL argues that Sierra Club has offered no evidence to support a claim that 28VHP LDAR is not BACT. CCL further maintains that the 28LAER LDAR program is a requirement in nonattainment areas and is not required as part of the BACT review.⁸⁹ The 28LAER program was designed for nonattainment areas as part of a lowest achievable emission rate technology review; therefore, that program does not apply to CCL because it is located in the Corpus Christi area, which is in attainment for all pollutants.⁹⁰

⁸⁷ Tr. at 72 (Lehotsky re-direct).

⁸⁸ Tr. at 72-73 (Lehotsky re-direct).

⁸⁹ Tr. at 49 (Ryan cross).

3. OPIC's Position

OPIC concludes that the preponderance of evidence indicates that it is not feasible or technically practicable for CCL to employ leakless technology for the entire Facility. OPIC recognizes that the best available control technology must be technically practical,⁹¹ but the record shows that the use of leakless technology for every component at the CCL site is not technically practical, and therefore cannot be BACT for fugitive emissions. OPIC concurs with the ED's position that the 28VHP LDAR program is BACT for fugitive emissions at the CCL site and that CCL has met its burden of proof on this issue.

4. ED's Position

According to the ED, his BACT review for fugitive emissions from the CCL Project is proper and applies the most stringent LDAR program for the proposed amount of emissions.⁹² For a facility proposing to emit over 25 tons per year of fugitive emissions, such as the CCL Project, TCEQ guidance shows that the 28VHP LDAR program with a 500 ppm by volume (ppmv) leak definition is BACT for this Facility.⁹³ Mr. O'Brien testified that the 28VHP LDAR program includes construction standards and direct monitoring for leaks using a handheld monitor with a leak definition of 500 ppmv and that prior TCEQ permitting actions have consistently used that leak definition level as BACT for the amount of fugitive emissions CCL estimates will be emitted from the CCL Project.⁹⁴

⁹⁰ Tr. at 54 (Ryan re-direct).

⁹¹ See Tex. Health & Safety Code § 382.0518(b)(1); 30 Tex. Admin. Code § 116.10(1).

⁹² ED Ex. 1 at 24 (O'Brien direct).

⁹³ ED Ex. 1 at 24 (O'Brien direct); ED Ex. 16.

⁹⁴ ED Ex. 1 at 25 (O'Brien direct).

In the ED's opinion, Sierra Club offered limited evidence that leakless technology would be feasible for all component emissions. The ED further points out that not only is monitoring required by the 28VHP LDAR program, but the program also requires compliance with standards promulgated by the American National Standards Institute, the American Petroleum Institute, the American Society of Mechanical Engineers, or other equivalent codes. In addition, the 28VHP LDAR program sets out requirements for the location of valves and piping connections, work practices, monitoring, repairs, and recordkeeping.⁹⁵ It is Mr. O'Brien's opinion that the applicant designs its piping, valves, connectors, pumps, and compressors to meet its business needs, and that requiring leakless components or welded connections goes beyond what is required in a BACT review.⁹⁶

5. ALJs' Analysis

The ALJs agree with CCL, OPIC, and the ED that the 28VHP LDAR monitoring program represents BACT for the CCL Project. This standard has been BACT since 2000,⁹⁷ and the TCEQ reviewed this standard again in 2011⁹⁸ and has applied it in recent permitting decisions for this level of emissions.⁹⁹

As Mr. O'Brien testified, BACT for fugitive VOC emissions is to apply the most stringent LDAR program for the proposed amount of emissions,¹⁰⁰ and the most stringent program for the level of emissions from the CCL Project is the 28VHP LDAR monitoring program with a 500 ppmv leak definition.¹⁰¹ The 28VHP LDAR program includes construction

⁹⁵ ED Closing at 6, citing ED Ex. 17 at 823-28.

⁹⁶ ED Ex. 1 at 24 (O'Brien direct).

⁹⁷ ED Ex. 16 at 789.

⁹⁸ CCL Ex. 215.

⁹⁹ ED Ex. 1 at 25 (O'Brien direct).

¹⁰⁰ ED Ex. 1 at 24 (O'Brien direct).

¹⁰¹ ED Ex. 1 at 24 (O'Brien direct); ED Ex. 16 at 789; CCL Ex. 215.

standards and requires direct monitoring for leaks with a leak definition of 500 ppmv, and the evidence shows that the TCEQ has consistently applied this leak definition as BACT for this level of emissions.¹⁰² Also, the 28LAER LDAR program is used in nonattainment areas, and the Corpus Christi area where the CCL Project is to be located has not been designated as such. Therefore, the evidence shows that the 28VHP LDAR program is BACT for the CCL Project.

Furthermore, the ALJs disagree with Sierra Club that the BACT analysis should have considered the use of leakless technology for all components that have the potential to emit fugitive emissions. As the evidence shows, CCL has already designed the CCL Project to minimize the use of components that have the potential to leak; nevertheless, it is not feasible to eliminate all such components.¹⁰³ For safety and maintenance reasons, some connections cannot be welded and must use a valve or a flange.¹⁰⁴ Even Sierra Club's witness, Mr. Powers, testified that flanges are necessary in certain instances to ensure the safety or reliability of an industrial process.¹⁰⁵

After weighing the evidence on this issue, the ALJs are convinced that the 28VHP LDAR program represents BACT for the CCL project. For the reasons stated in this PFD, the ALJs recommend that the Commission find that CCL has met its burden of proof on this issue.

V. SPECIAL CONDITIONS

A. Special Conditions 4(A) and 4(B)

The Draft Permit currently contains the following two special provisions:

¹⁰² ED Ex. 1 at 24 (O'Brien direct); ED Ex. 16 at 797-99.

¹⁰³ Tr. at 72 (Lehotsky re-direct).

¹⁰⁴ Tr. at 73 (Lehotsky re-direct).

¹⁰⁵ Tr. at 160 (Powers cross).

Special Condition 4(A): The concentration of nitrogen oxides (NO_x) from EPNs TRB1 through TRB18 shall not exceed 25 parts per million by volume dry (ppmvd) corrected to 15 percent oxygen (O₂) on a four-hour rolling average for continuous fuel-to-water ratio monitoring and a one-hour basis for stack emissions testing, except during startup or shutdown.

Special Condition 4(B): The concentration of carbon monoxide (CO) from EPNs TRB1 through TRB18 shall not exceed 29 ppmvd corrected to 15 percent O₂, on a one-hour average, except during startup and shutdown.¹⁰⁶

At the hearing, OPIC asked Mr. O'Brien whether these two provisions mean that the emission limits will apply to each individual turbine or to an average of all the turbines. Mr. O'Brien responded that the limitations would apply to each individual turbine,¹⁰⁷ and OPIC argues that these provisions should be changed to reflect this interpretation of the requirements.

CCL responds that such changes to the special conditions are not warranted because the Maximum Allowable Emissions Rates Table (MAERT) states that the emission limits apply on a "per turbine" basis.¹⁰⁸ The ED responded that although he does not believe changes to the two special conditions are warranted, he is not opposed to changes to clarify the issue.

Although the MAERT states that "[e]mission rates are per turbine," the ALJs agree with OPIC that the language in Special Conditions 4(A) and 4(B) does not clearly indicate that each limit in the special conditions apply to each turbine. Therefore, the ALJs recommend that the phrase "per turbine" be inserted in each special condition as follows:

Special Condition 4(A): The concentration of nitrogen oxides (NO_x) from EPNs TRB1 through TRB18 shall not exceed 25 parts per million by volume dry (ppmvd) per turbine corrected to 15 percent oxygen (O₂) on a four-hour rolling

¹⁰⁶ ED Ex. 17 at 821.

¹⁰⁷ Tr. at 186.

¹⁰⁸ ED Ex. 17 at 832.

average for continuous fuel-to-water ratio monitoring and a one-hour basis for stack emissions testing, except during startup or shutdown.

Special Condition 4(B): The concentration of carbon monoxide (CO) from EPNs TRB1 through TRB18 shall not exceed 29 ppmvd per turbine corrected to 15 percent O₂, on a one-hour average, except during startup and shutdown.

B. Special Condition 7

OPIC also recommends a change to Special Condition 7, which currently reads:

Special Condition 7: Upon request by the ED of the TCEQ or any local air pollution control program having jurisdiction, the holder of this permit shall provide a sample and/or an analysis of the fuel, or shall allow air pollution control agency representatives to obtain a sample for analysis.¹⁰⁹

OPIC argues that this provision or the recordkeeping provisions in Special Conditions 23 and 24 should require CCL to maintain documentation from the fuel supplier certifying the analysis and sulfur content of fuels supplied to CCL. Many of the emission calculations and limits depend on the composition of the fuels being used at the CCL site. Therefore, OPIC asserts that the composition of those fuels is critical and CCL should maintain records documenting that composition. However, OPIC does not suggest a length of time that CCL should be required to retain such records.

CCL replies that although it intends to maintain documentation of fuel composition for three years, it sees no reason why the permit should include such a requirement. Further, there is no evidence that the current language in the Draft Permit is different from other TCEQ permits, and federal law imposes its own requirements for demonstrating compliance. The ED again opined that although changes were not necessary, he would not object to changes to the Draft Permit on this issue.

¹⁰⁹ ED Ex. 17 at 821.

The ALJs do not agree with OPIC that the Draft Permit should include language requiring CCL to retain records regarding fuel composition. There is no evidence in the record on which to determine what would be a reasonable amount of time to require CCL to retain such information. Further, any time period suggested by the ALJs may be inconsistent with federal law and other TCEQ permits. Therefore, the ALJs do not recommend any changes to Special Condition 7.

VI. TRANSCRIPTION COSTS

The TCEQ's rules at 30 Texas Administrative Code § 80.23(d) provide that the Commission may assess reporting and transcription costs to one or more of the parties participating in the proceeding. When doing so, the Commission is directed to consider the following factors:

- (1) the party who requested the transcript;
- (2) the financial ability of the party to pay the costs;
- (3) the extent to which the party participated in the hearing;
- (4) the relative benefits to the various parties of having a transcript; [and]
- (5) any other factor which is relevant to a just and reasonable assessment of costs.¹¹⁰

In addition, transcript costs cannot be assessed against the ED and OPIC because they are statutory parties who are precluded from appealing the decision of the Commission.¹¹¹

Except for the costs incurred for an expedited transcript, CCL seeks to split the transcription costs of \$1,501.50 evenly with Sierra Club. CCL claims that Sierra Club is a

¹¹⁰ 30 Tex. Admin. Code § 80.23(d).

¹¹¹ 30 Tex. Admin. Code § 80.23(3); *see* Tex. Water Code §§ 5.228, 5.273, 5.275, 5.356.

national organization that has not demonstrated a financial inability to pay. Sierra Club requested the hearing on the merits, participated fully in the hearing, and benefited from having a transcript. CCL points out that Sierra Club withdrew prefiled testimony at the hearing and did not contest certain issues or cross-examine certain witnesses. However, according to CCL, Sierra Club failed to stipulate in advance of the hearing that it was contesting only a small fraction of the issues previously raised in its comments and discovery responses, thereby, causing CCL to incur substantial costs by having many of its witnesses attend the hearing without being cross-examined. CCL argues that it would be unjust for it to bear the entire cost of the transcript.

Sierra Club disagrees with CCL's assessment of this issue. According to Sierra Club, this case is analogous to the application of the Upper Trinity Regional Water District (UTRWD),¹¹² "[a] recent SOAH proposal for decision, on analogous facts, [that] fully allocated costs to the project applicant."¹¹³ Sierra Club asserts that CCL is a for-profit entity proposing a multi-billion dollar project, whose ability to pay the costs of the transcript is greater than Sierra Club's, a non-profit public interest organization. Sierra Club argues that CCL participated more extensively in the hearing than did Sierra Club. By requesting a direct referral of its application, CCL assumed the burden of providing evidence on all the issues relating to the Draft Permit, regardless of the actual issues contested by Sierra Club. Furthermore, Sierra Club disputes CCL's assertions that it failed to negotiate with CCL on ways to streamline the hearing process, alleging that it submitted proposals to CCL that CCL rejected.

The ALJs conclude that CCL and Sierra Club should split the costs of the transcript. The parties initially estimated that the hearing on the merits would last five days, and the ALJ ordered CCL to arrange for and pay for a transcript.¹¹⁴ However, the actual hearing on the merits

¹¹² *Application of Upper Trinity Regional Water District for Water Use Permit No. 5821*, SOAH Docket No. 582-12-5332, TCEQ Docket No. 2012-0065-WR, Proposal for Decision (June 25, 2013).

¹¹³ SC Reply to Closing Arguments at 19.

¹¹⁴ SOAH Order No. 1 (Aug. 26, 2013).

lasted approximately 1 and 1/2 days. Although there is no evidence of a financial ability to pay the transcript costs, Sierra Club is a national organization and CCL is an applicant proposing a multi-billion project, so both appear to have adequate resources to pay for the transcript.

Sierra Club relies on the *UTRWD* proposal for decision to support its position, alleging that all the costs in that case were allocated to the applicant. However, in *UTRWD*, the ALJs recommended an allocation of transcription costs between three parties: the applicant, a city, and national non-profit organization. After assessing the parties' level of participation and reviewing the amount of time spent in the hearing, the ALJs recommended that the transcription expenses be allocated proportionately among the three parties, and the Commission agreed with the recommended allocation.

In this case, both CCL and Sierra Club participated fully in the hearing. Both parties raised significant issues, presented direct cases, and engaged in cross-examination. Both parties sought to protect important interests and benefited from the use of a transcript in advocating their positions. For the reasons stated in this proposal for decision, the ALJs recommend that the transcription costs of \$1,501.50 be allocated between CCL and Sierra Club evenly, with both parties paying \$750.75.¹¹⁵

However, if the Commission concludes that Sierra Club does not have standing and should not have been a party, then the ALJs recommend that all the transcription costs be allocated to CCL. Section 80.23(d) provides that the Commission may allocate transcription costs between the parties. If Sierra Club should not have been a party, then CCL is the only party eligible to pay the transcription costs under section 80.23(d)(1) and (2).


¹¹⁵ Sierra Club stated that the proper amount of transcription costs, minus the costs for expediting the transcript, is \$1,876. SC Reply to Closing Arguments at 19. However, CCL claims that the actual cost to be divided between the two parties is \$1,501.50. CCL Reply Brief at 17.


VII. CONCLUSION

In conclusion, the ALJs find that CCL has met its burden of proof on all issues presented. Accordingly, the ALJs have drafted a proposed order with findings of fact and conclusions of law. Because the contested technical issues in this hearing were limited to the BACT analysis regarding electric motors and fugitive emissions, the ALJs relied heavily on CCL's proposed findings of fact and conclusions of law in preparing those sections of the proposed order that are uncontested.

In addition, Sierra Club submitted proposed findings and conclusions in its Reply to Closing Arguments on the limited issues it contested. As set out in the proposal for decision, the ALJs do not agree with Sierra Club on the contested BACT issues and, therefore, reject its proposed findings of facts and conclusions of law on BACT. Likewise, the ALJs reject CCL's findings of fact and conclusions of law on the issue of Sierra Club's standing.

SIGNED May 15, 2014.



TOMMY L. BROYLES
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

KERRIE JO QUALTROUGH
ADMINISTRATIVE LAW JUDGE
STATE OFFICE OF ADMINISTRATIVE HEARINGS

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



**AN ORDER Approving the Application of
Corpus Christi Liquefaction, LLC for
Air Quality Permit Nos. 105710 and PSD-TX-1306
TCEQ Docket No. 2013-1191-AIR
SOAH Docket No. 582-13-5205**

On _____, the Texas Commission on Environmental Quality (TCEQ or Commission) considered the application of Corpus Christi Liquefaction, LLC for Air Quality Permit Nos. 105710 and PSD-TX-1306. Administrative Law Judges Tommy L. Broyles and Kerrie Jo Qualtrough of the State Office of Administrative Hearings presented a proposal for decision recommending that the Commission approve the application and issue the requested permits. After considering the proposal for decision, the Commission adopts the following findings of fact and conclusions of law:

I. FINDINGS OF FACT

Introduction and Procedural History

1. Corpus Christi Liquefaction, LLC (CCL) is proposing to construct a new natural gas liquefaction terminal with regasification capabilities near Gregory, Texas (the CCL Project). The CCL Project will operate three ConocoPhillips Optimized Cascade[®] Process liquefaction trains using efficient, gas-fired turbines to drive refrigeration compressors and two ambient air vaporizer packages to regasify liquefied natural gas (LNG). It will be capable of processing an annual average of approximately 2.1 billion standard cubic feet per day (Bcf/d) of pipeline-quality natural gas for export in the liquefaction mode and 400 million standard cubic feet per day (MMcf/d) for import in the vaporization mode.
2. CCL is a subsidiary of Cheniere Energy, Inc. (Cheniere), Cheniere is a Houston-based company primarily engaged in LNG-related businesses. Through its affiliate, Cheniere Energy Partners, L.P., Cheniere developed the Sabine Pass LNG project, which is an existing import and proposed export facility in Louisiana.

3. The CCL Project will be located approximately 3.0 miles southeast of Gregory in San Patricio and Nueces Counties, Texas.
4. Pursuant to 30 Texas Administrative Code § 116.111(a)(1), CCL filed a PI-1 General Application with necessary supporting information with the TCEQ to comply with all requirements for state air quality and Prevention of Significant Deterioration (PSD) review. The Application was initially submitted to TCEQ on August 31, 2012, and supplemented from time to time thereafter and includes confidential material.
5. The CCL Project will include three ConocoPhillips Optimized Cascade[®] Process liquefaction trains and associated equipment, including eighteen GE LM2500+G4 gas-fired refrigeration compressor turbines, three acid gas removal units, three thermal oxidizers, and three heavies removal units.
6. Ancillary equipment proposed includes an internal floating roof condensate storage tank and truck loading facility, flare systems, standby generators, firewater pumps, and various fixed roof storage tanks.
7. The Application was declared administratively complete on September 14, 2012, and technically complete on July 9, 2013, on which date the Executive Director (ED) rendered his preliminary decision to approve the Application.
8. The ED issued an initial draft permit on July 9, 2013. The ED subsequently issued a final draft permit (Draft Permit) in response to comments. The Draft Permit made clarifying edits and inserted a new Special Condition 22 regarding sulfur monitoring in response to Sierra Club's comments on the initial draft permit.
9. CCL published "Notice of Receipt of Application and Intent to Obtain Air Permit" in *The Coastal Bend Herald* on September 27, 2012.
10. CCL filed a Request for Direct Referral of the Application to the State Office of Administrative Hearings (SOAH) on June 13, 2013.
11. CCL published "Notice of Application and Preliminary Decision and Notice of Hearing" in *The Coastal Bend Herald* on July 11, 2013.
12. The Application was made available for public inspection at the Bell/Whittington Public Library in Portland, San Patricio County, Texas and at La Retama Central Library in Corpus Christi, Nueces County, Texas during the entire public notice period.
13. Notification of the Application was made to all agencies, regulatory bodies, and other persons and entities to which notification was required.
14. After proper mailing and publication of public notice on July 11, 2013, the SOAH Administrative Law Judge (ALJ) convened a preliminary hearing on August 15, 2013.

No one objected to the party status of Sierra Club, and the following were named as parties to the proceeding:

PARTY	REPRESENTATIVE
CCL	Derek McDonald and Nick Graham, Attorneys
The ED	Booker Harrison, Staff Attorney
Office of Public Interest Counsel (OPIC)	Amy Swanholm, Attorney
Sierra Club	David O. Frederick and Nathan Matthews, Attorneys

15. On February 10-11, 2014, the hearing on the merits was held before SOAH ALJs Tommy L. Broyles and Kerrie Jo Qualtrough. The following parties appeared and participated in the hearing: (1) CCL; (2) Sierra Club; (3) the ED; and (4) OPIC.
16. The evidentiary record closed on March 21, 2014, after replies to written closing arguments were filed.

Completeness of the Application

17. The Application included all necessary supporting information and appropriate TCEQ forms, and the ED declared the Application administratively complete on September 14, 2012.
18. The Application addressed all sources of air emissions associated with the CCL Project that are subject to permitting under TCEQ rules.
19. The CCL properly identified the CCL Project sources and emissions rates.
20. CCL employed appropriate emission factors and assumptions in calculating emissions from CCL Project sources.
21. The Application addressed applicable TCEQ Disaster Review requirements triggered by the CCL Project. The CCL Project is not subject to TCEQ Disaster Review.
22. The appropriate permit fee of \$75,000 was submitted with the Application.
23. The Application includes a complete Form PI-1 General Application signed by CCL's authorized representative. The Application was submitted under the seal of a Texas registered professional engineer.

24. On July 9, 2013, the ED determined that the Application was technically complete and in compliance with all applicable rules and policies as documented in the administrative record. CCL is not delinquent in the payment of any fee, tax, or penalty owed to the state.

Affected Person Status

25. Peter Davidson is a member of Sierra Club and was available to testify at the August 15, 2013 preliminary hearing to demonstrate how he would be affected by the CCL Project. No party required Mr. Davidson to testify regarding his affected person status, no party objected or claimed that Mr. Davidson was not an affected person, and no party objected to Sierra Club's party status. Accordingly, Sierra Club was named a party to this proceeding.
26. On September 24, 2013, Sierra Club designated Mr. Davidson as a fact witness to testify at the hearing on the merits on standing issues.
27. On December 23, 2013, Mr. Davidson signed an affidavit stating that he had decided not to participate further in this proceeding due to perceived threats against his family members. He also stated in his affidavit that he was still a member of Sierra Club, lived within 3,100 yards from the CCL Project, lived near the beach, and walked along and used the beach and bay near the CCL Project.
28. With Mr. Davidson's refusal to participate, Sierra Club moved for leave to amend its witness list and to substitute Alvin Baker for Mr. Davidson to demonstrate Sierra Club continued to have an affected party representative.
29. Mr. Baker was a member of Sierra Club on August 15, 2013, and was still a member of Sierra Club on February 10, 2014.
30. Mr. Baker's residence is approximately 4.5 miles from the CCL Project. His place of employment is within .25 miles of the proposed facility and is essentially next door to the CCL Project. His place of employment is a service-and-repair garage, and the garage door is kept open most of the day for ventilation purposes. Mr. Baker also performs yard work at his house and has a three-acre garden in which he spends a lot of time. Mr. Baker suffers from hay fever.
31. Mr. Baker lives and works within the radius of impact (ROI) modeled by CCL for NO₂ concentrations measured on a 1-hour basis. His place of employment is also within the ROI modeled for annual NO₂ concentrations. The modeled impacts for annual and 1-hour NO₂ concentrations exceed EPA's significant impact levels (SILs).
32. Mr. Baker and Mr. Davidson are similarly positioned for any potential adverse effects from the CCL Project.

33. At the time of the preliminary hearing, there was the potential that Mr. Davidson could be impacted by emissions from the CCL Project.
34. At the time of the preliminary hearing, there was the potential that Mr. Baker could be impacted by emissions from the CCL Project.
35. There is a reasonable relationship between the interests Mr. Davidson originally sought to protect and the activity the proposed permit would regulate.
36. There is a reasonable relationship between the interests Mr. Baker seeks to protect and the activity the proposed permit would regulate.

Definition of a Source

37. The CCL Project is located over seven miles from a proposed compressor station near Taft, Texas, and over 20 miles from a proposed compressor station near Sinton, Texas. Cheniere Corpus Christi Pipeline, L.P., a subsidiary of Cheniere, will build, own and operate these proposed compressor stations.
38. Cheniere and its subsidiaries do not own the intervening land between the CCL Project Site and the proposed Cheniere Corpus Christi Pipeline, L.P. compressor stations.
39. Under TCEQ rules and guidance, the distance between the CCL Project Site and the proposed Cheniere Corpus Christi Pipeline, L.P. compressor stations is too great to consider them part of the CCL Project for air permitting purposes.
40. Under TCEQ rules and guidance, the proposed Cheniere Corpus Christi Pipeline, L.P. compressor stations are not contiguous or adjacent to the CCL Project Site.

Demonstrations Under 30 Tex. Admin. Code § 116.111: Protection of Public Welfare Air Dispersion Modeling

CCL's Air Dispersion Modeling

41. The National Ambient Air Quality Standards (NAAQS), which are set by the United States Environmental Protection Agency (EPA), are levels of air quality determined to protect the public health and welfare and the environment.
42. The NAAQS apply to six criteria pollutants: sulfur dioxide (SO₂), particulate matter (PM), nitrogen dioxide (NO₂), carbon monoxide (CO), ozone, and lead.
43. CCL performed air dispersion modeling, which was summarized in its November 2012 Air Quality PSD Modeling Protocol Report, as supplemented on November 26, 2012; December 20, 2012; January 8, 2013; January 10, 2013; January 15, 2013; January 28, 2013; February 27, 2013; April 1, 2013; April 15, 2013; April 23, 2013; and

May 1, 2013; its May 2013 Air Quality Modeling Analysis Report; and in the testimony of CCL's expert witnesses Michael T. Meister and Dennis E. McNally.

44. CCL performed the modeling using EPA's AERMOD model. This model was recommended by both TCEQ and EPA for modeling complex industrial sources like the CCL Project.
45. The modeling that CCL included in the Application was performed in accordance with applicable air quality rules and guidance, and in accordance with the modeling protocol cooperatively developed for this project by CCL and TCEQ's air dispersion modeling team.
46. There are no schools located within 3,000 feet of the facilities that would be authorized by issuance of the Draft Permit.
47. In performing the air dispersion modeling, CCL modeled emissions from all emissions sources required to be modeled at the CCL Project.
48. The ED approved the modeled emission point and area sources parameters and rates, as well as the source characterizations used to represent the sources.
49. CCL's application of EPA guidance on intermittent emissions was proper for CCL's 1-hour NO₂ and 1-hour SO₂ NAAQS analyses.
50. CCL appropriately evaluated sources associated with maintenance, startup, and shutdown (MSS) scenarios under EPA guidance related to intermittent emissions.
51. CCL appropriately applied nitrogen oxide (NO_x) to NO₂ conversion factors of 0.75 and 0.8 to the modeled annual and 1-hour NO_x emission rates, respectively. This is consistent with guidance for combustion sources.
52. CCL's air dispersion modeling was conservative, that is, it likely over-predicts off-property ambient concentrations.
 - a. CCL used worst-case emission rates for the CCL Project, for every hour of the five-year meteorological data base modeled.
 - b. CCL assumed that all sources at the CCL Project would be operating simultaneously and emitting their maximum rates at the same time, which will not occur in practice.
 - c. CCL coupled worst-case meteorological dispersion conditions with the worst-case emissions scenario to calculate maximum off-property impacts.
 - d. CCL used conservative emission rates.

53. Conducting its modeling, CCL properly relied on the pre-processed National Weather Service (NWS) meteorological data supplied by TCEQ.
54. CCL selected NWS meteorological data from the Corpus Christi International Airport for surface meteorological data and from Victoria, Texas Upper Air Station ID VCT for upper air meteorological data. TCEQ recommends using meteorological data from the Corpus Christi International Airport and from Victoria, Texas's upper air station for projects in San Patricio and Nueces Counties because the data is representative of the conditions at locations in these counties.
55. The surface data from the Corpus Christi International Airport is reliable and representative of the conditions at the CCL Project Site.
56. The upper air data from the Victoria, Texas Upper Air Station ID VCT is reliable and representative of the conditions at the Project Site.
57. TCEQ's modeling staff performed an audit of CCL's modeling and found it acceptable.
58. The standards and guidelines applicable to the Application's maximum modeled pollutant concentrations are: NAAQS, PSD increments and PSD Additional Impacts Analysis, state Property Line standards, and Effects Screening Levels (ESLs).

“Ambient Air” and Public Access to the Plant Site

59. Section 50.1(e) in title 40 of the Code of Federal Regulation (CFR) defines ambient air as “that portion of the atmosphere, external to buildings, to which the general public has access.”
60. CCL will control access to the CCL Project Site. The site is currently accessible only via La Quinta Road, which is a gated-private road. Access to the public during construction and operation will be restricted through a combination of fences, full-time security, and a security zone around the marine berth area.
61. Ambient air does not exist within the CCL Project Site because access by the general public is prohibited.
62. For its federal NAAQS and PSD analyses in the Application, CCL properly used an air dispersion modeling boundary that corresponded to the boundaries of the CCL Project where access by the general public is restricted (in ambient air as defined in EPA rules). For its state property line and ESL analyses in the Application, CCL used an air dispersion modeling boundary that corresponded to the property boundaries of the CCL Project that are beyond the CCL Project (in ambient air as defined in TCEQ's Modeling and Effects Review Applicability (MERA) guidance).

63. At the hearing, CCL presented acceptable air dispersion modeling for its state property-line and ESL analyses using the boundaries of the CCL Project as with its NAAQS and PSD analyses.

NAAQS and PSD Analyses

64. In 40 CFR Part 50, as adopted by reference at 30 Texas Administrative Code § 101.21, EPA established primary and secondary NAAQS for NO₂, CO, SO₂, PM with a diameter of 10 micrometers or less (PM₁₀), particulate matter with a diameter of 2.5 micrometers or less (PM_{2.5}), ozone, and lead.
65. EPA established PSD increments for NO₂, SO₂, PM₁₀, and PM_{2.5} in 42 U.S.C. § 7473; 52 Fed. Reg. 24,634 (Jul. 1, 1987); 53 Fed. Reg. 40,656-40,670-72 (Oct. 17, 1988); 75 Fed. Reg. 64,863 (Oct. 20, 2010).
66. CCL performed air dispersion modeling of emissions of NO₂, CO, PM_{2.5}, PM₁₀, and ozone from the CCL Project for the purpose of demonstrating compliance with the NAAQS and PSD increments.
67. EPA has established SILs and TCEQ has established *de minimis* levels for NO₂, CO, SO₂, PM₁₀, and PM_{2.5}. If the maximum modeled concentrations resulting from emissions of a contaminant from the CCL Project are predicted to be insignificant (*i.e.*, below the applicable EPA SIL and TCEQ *de minimis* level for that contaminant and averaging time), then the NAAQS and PSD increment analyses for that contaminant are complete and the CCL Project is presumed not to cause or contribute to a violation of the NAAQS or PSD increment for that contaminant and averaging time.
68. On January 22, 2013, the United States Court of Appeals for the District of Columbia Circuit granted a request from EPA to vacate and remand to EPA the portions of two PSD PM_{2.5} rules addressing the SILs for PM_{2.5} so that EPA could voluntarily correct an error in these provisions. On March 4, 2013, EPA issued guidance regarding the continued use of the PM_{2.5} SILs in PSD permitting actions pending completion of EPA's revisions to the PM_{2.5} SIL rules.
69. On March 4, 2013, EPA issued draft guidance regarding secondary formation of PM_{2.5}.
70. CCL prepared an analysis of secondary PM_{2.5} formation as a result of emissions from the CCL Project. The analysis demonstrated that, even considering secondary formation of PM_{2.5}, emissions from the CCL Project are not expected to cause or contribute to a violation of the PM_{2.5} NAAQS. This analysis is acceptable.
71. For the contaminants and averaging times for which maximum modeled concentrations resulting from emissions from the CCL Project LNG Terminal were above the SILs and TCEQ *de minimis* levels, CCL performed cumulative modeling and demonstrated compliance with NAAQS and PSD increments.

72. The ambient background concentrations used by CCL for the area of the CCL Project are conservative and in accordance with TCEQ guidance.

NO₂

73. NO₂ NAAQS exist for two averaging periods: annual (100 micrograms per cubic meter of air (µg/m³)) and 1-hour (188 µg/m³).
74. As CCL Project emissions exceeded the SILs for annual and 1-hour NO₂, CCL conducted full NAAQS modeling for each averaging period for NO₂.
75. CCL obtained background concentrations for NO₂ from EPA AIRS monitor 48-039-1016 located at 109b Brazoria Hwy. 332 West, Lake Jackson, Brazoria County. The ED determined that the use of this monitor was reasonable.
76. The maximum modeled annual average NO₂ concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is 10 µg/m³. The background concentration is 6 µg/m³. The sum of the maximum modeled annual average NO₂ concentration resulting from the CCL Project's emissions and the background concentration is 16 µg/m³, which is beneath the NAAQS of 100 µg/m³.
77. The maximum modeled 1-hour average NO₂ concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is 123 µg/m³. The background concentration is 40 µg/m³. The sum of the maximum modeled 1-hour average NO₂ concentration resulting from the CCL Project's emissions and the background concentration is 163 µg/m³, which is beneath the NAAQS of 188 µg/m³.
78. As shown by the full NAAQS modeling results for annual and 1-hour NO₂, the total predicted concentrations will not result in an exceedance of the NAAQS for either averaging period.

CO

79. CO NAAQS exist for two averaging periods: 1-hour (40,000 µg/m³) and 8-hour (10,000 µg/m³).
80. The maximum modeled 1-hour average CO concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is 142 µg/m³, which is below the EPA SIL and TCEQ *de minimis* level for 1-hour average CO of 2,000 µg/m³.
81. The impact of the CCL Project's CO emissions on 1-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 1-hour average CO NAAQS of 40,000 µg/m³.

82. The maximum modeled 8-hour average CO concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is $75 \mu\text{g}/\text{m}^3$, which is below the EPA SIL and TCEQ *de minimis* level for 8-hour average CO of $500 \mu\text{g}/\text{m}^3$.
83. The impact of the CCL Project's CO emissions on 8-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 8-hour average CO NAAQS of $10,000 \mu\text{g}/\text{m}^3$.

PM₁₀

84. The NAAQS for PM₁₀ is $150 \mu\text{g}/\text{m}^3$ (24-hour).
85. The maximum modeled 24-hour average PM₁₀ concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is $1.1 \mu\text{g}/\text{m}^3$, which is below the EPA SIL and TCEQ *de minimis* level for 1-hour average PM₁₀ of $5 \mu\text{g}/\text{m}^3$.
86. The impact of the CCL Project's PM₁₀ emissions on 24-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 24-hour average PM₁₀ NAAQS of $150 \mu\text{g}/\text{m}^3$.
87. The maximum modeled annual average PM₁₀ concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is $0.29 \mu\text{g}/\text{m}^3$, which is below the EPA SIL and TCEQ *de minimis* level for annual average PM₁₀ of $1 \mu\text{g}/\text{m}^3$.
88. The impact of the CCL Project's PM₁₀ emissions on annual average concentrations is insignificant and will not cause or contribute to an exceedance of the PM₁₀ NAAQS.

PM_{2.5}

89. PM_{2.5} NAAQS exist for two averaging periods, annual and 24-hour.
90. The 24-hour PM_{2.5} NAAQS is $35 \mu\text{g}/\text{m}^3$.
91. The annual NAAQS for PM_{2.5} was $15 \mu\text{g}/\text{m}^3$ at the time the Application was declared complete. The annual NAAQS for PM_{2.5} was subsequently revised to $12 \mu\text{g}/\text{m}^3$ by EPA, effective March 18, 2013. Because the Application was declared complete prior to December 14, 2012, the $15 \mu\text{g}/\text{m}^3$ standard applied to TCEQ's review of the CCL Project.
92. The maximum modeled 24-hour average PM_{2.5} concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is $1.1 \mu\text{g}/\text{m}^3$, which is below the EPA SIL and TCEQ *de minimis* level for 1-hour average PM_{2.5} of $1.2 \mu\text{g}/\text{m}^3$.

93. The impact of the CCL Project's PM_{2.5} emissions on 24-hour average concentrations is insignificant and will not cause or contribute to an exceedance of 24-hour average PM_{2.5} NAAQS of 35 µg/m³.
94. The maximum modeled annual average PM_{2.5} concentration resulting from the CCL Project's emissions in ambient air as defined in EPA rules is 0.29 µg/m³, which is below the EPA SIL and TCEQ *de minimis* level for annual average PM_{2.5} of 0.3 µg/m³.
95. CCL did additional analysis consistent with EPA guidance and TCEQ practice to demonstrate that adding the modeling results from the directly emitted PM_{2.5} emissions to representative background concentrations gives total concentrations of PM_{2.5} that are well below the 24-hour and annual PM_{2.5} NAAQS.
96. CCL assessed secondary formation of PM_{2.5} from CCL Project emissions and determined that, taking into account secondary formation of PM_{2.5}, the CCL Project is not expected to cause or contribute to a violation of the PM_{2.5} NAAQS.

Ozone

97. The 8-hour ozone NAAQS is 0.075 parts per million (ppm), or 75 parts per billion (ppb).
98. The CCL Project will emit NO_x and volatile organic compounds (VOCs), which can form ozone in the atmosphere.
99. An area that meets the NAAQS for a particular criteria pollutant is deemed to be in "attainment" for that pollutant. An area that does not meet the NAAQS is a "nonattainment" area. An area that cannot be classified due to insufficient data is "unclassifiable," which allows the area to be treated for regulatory purposes as though it were an attainment area for the particular criteria pollutant in question. 42 U.S.C. § 7407(d).
100. TCEQ guidance requires the use of a screening technique to determine whether a proposed source will cause ozone exceedances in a local attainment area.
101. If a source is VOC limited, then local ozone impacts would not be expected to cause a significant increase in ozone formation at or near the proposed site.
102. The CCL Project is VOC limited and CCL's demonstration is acceptable and complete in accordance with TCEQ guidance.
103. Based on TCEQ guidance, the CCL Project is not expected to cause any ozone NAAQS exceedances in the local attainment area.
104. TCEQ does not require an applicant to conduct photochemical modeling to evaluate potential ozone impacts for PSD permitting.

105. Photochemical modeling was conducted for the CCL Project. That photochemical modeling demonstrated that there would not be a significant change to ozone levels due to the emissions from the CCL Project.
106. The CCL Project's maximum incremental contribution to ozone regulatory monitors, based on photochemical modeling, is 1.48 ppb at the Corpus Christi Tuloso monitor, and average impacts at this monitor and time were less than 0.36 ppb.
107. TCEQ has used a 3 to 5 ppb significance threshold for evaluating ozone impacts simulated by photochemical modeling for new projects. The maximum simulated impact of the CCL Project is within the range TCEQ has deemed insignificant.
108. Emissions from the CCL Project will not cause or contribute to a violation of the 8-hour ozone NAAQS of 0.075 ppm.

NAAQS Summary

109. Emissions from the CCL Project will not cause or contribute to a violation of any NAAQS.

PSD Increment Analysis

110. The *de minimis* modeling conducted by CCL indicated that annual NO₂ exceeds the *de minimis* concentration and therefore requires a PSD increment analysis.
111. No PSD increment has been established for 1-hour NO₂.
112. Maximum modeled concentrations resulting from emissions of other contaminants from the CCL Project in ambient air as defined in EPA rules are below the EPA SILs and TCEQ *de minimis* levels, as applicable, and therefore do not require a PSD increment analysis.
113. The maximum modeled annual average NO₂ concentration resulting from the CCL Project's emissions and other PSD increment-consuming sources in the area is 10 µg/m³ which is beneath the annual average PSD increment of 25 µg/m³.
114. The CCL Project's emissions will not cause or contribute to an exceedance of any PSD increment.

PSD Monitoring Analysis

115. Maximum modeled concentrations resulting from the CCL Project's emissions in ambient air as defined in EPA rules are below all applicable PSD monitoring significance levels.

116. The PSD monitoring significance level for PM_{2.5} was vacated by the United States Court of Appeals for the District of Columbia Circuit on January 22, 2013.
117. Following the vacatur of the PSD monitoring significance level for PM_{2.5}, EPA issued draft guidance explaining that applicants could use data from existing monitors to satisfy the preconstruction monitoring requirement, provided the permitting authority determined that the existing monitors were representative of background conditions in the affected area.
118. CCL evaluated representative ambient PM_{2.5} monitoring data from EPA AIRS monitor 48-355-0034 at 5707 Up River Road, Corpus Christi, Texas, to satisfy the PSD monitoring requirements.

State NAAQS Analysis

119. The CCL Project did not trigger PSD review for SO₂. CCL conducted a state air dispersion modeling analysis to demonstrate that the SO₂ emissions from the CCL Project will not cause or contribute to a violation of the applicable NAAQS.
120. The modeling was conducted in accordance with applicable EPA and TCEQ guidelines.
121. Maximum predicted concentrations of SO₂ were beneath the *de minimis* levels for the 1-hour, 3-hour, 24-hour, and annual averaging periods.
122. SO₂ emissions from the CCL Project will not cause or contribute to a violation of the SO₂ NAAQS for any averaging period.

State Property Line Analysis

123. State property-line standards are net ground level concentration standards established by TCEQ.
124. State property-line standards exist for hydrogen sulfide (H₂S) and for SO₂.
125. CCL modeled site-wide emissions from the CCL Project for comparison to applicable state property-line standards.
126. The maximum modeled concentrations resulting from the CCL Project's emissions at the CCL Project Site's property line are below the applicable state property-line standards.

State Property Line Analysis: H₂S

127. The maximum 1-hour average H₂S concentration resulting from site-wide emissions is 0.02 µg/m³ at the CCL Project Site's property line.

128. The site-wide H₂S emissions will not cause an exceedance of the 1-hour H₂S property line standard of 108 µg/m³.

State Property Line Analysis: SO₂

129. The maximum 1-hour average SO₂ concentration resulting from site-wide emissions is 16 µg/m³ at the CCL Project Site's property line.
130. The site-wide SO₂ emissions will not cause an exceedance of the 1-hour SO₂ property line standard of 1,021 µg/m³.

Property-Line Standard Summary

131. The emissions from the CCL Project will not cause an exceedance of any applicable state property-line standard.

ESL Analysis

132. An applicant demonstrates that emissions from a proposed facility will be protective of the public health and physical property by evaluating predicted concentrations of air pollutants in the ambient air with air dispersion modeling.
133. As required by the TCEQ, CCL conducted ESL modeling for non-criteria pollutants with a receptor grid that began at the property line.
134. A state ESL analysis applies to contaminants for which there are no state or federal ambient air quality standards.
135. ESLs are designed to protect the public health and welfare for non-criteria pollutants, or those that are not subject to a NAAQS.
136. TCEQ uses ESLs as part of the state effects review of an air permit application as conservative guideline levels to evaluate the potential for effects to public health, welfare or property as a result of exposure to air pollutants for which there is no state or federal air quality standard.
137. ESLs are set very conservatively and are designed to protect even the most sensitive members of the population, including children, the elderly, and people with pre-existing conditions.
138. Maximum modeled air concentrations that do not exceed the ESL will not cause adverse health or welfare effects from the public's exposure to that chemical, and concentrations above the ESLs will not necessarily cause adverse health or welfare effects, but may require further study.

139. Predicted concentrations above an ESL do not indicate that an adverse health or welfare impact will occur. Rather, when the maximum off-property impacts exceed an ESL for a contaminant, additional evaluation is required to determine whether or not the potential impacts of that contaminant will pose any threat to public health, welfare, or the environment.
140. The ESL system currently used by TCEQ adequately protects the health and welfare of the public.
141. TCEQ uses a guidance document entitled “Modeling and Effects Review Applicability: How to Determine the Scope of Modeling and Effects Review for Air Permits,” APDG 5874, dated July 2009 (the MERA Guidance), and the latest Effects Screening Level list to analyze non-criteria pollutants.
142. Consistent with the MERA Guidance, CCL excluded emissions from the proposed natural gas turbines, as well as the natural gas pilot emissions from all flares proposed on-site, from the evaluation.
143. Consistent with the MERA Guidance, CCL evaluated 31 compounds to be emitted by the CCL Project. Twenty-eight of these compounds were determined not to require further analysis prior to Step 11 of the MERA Guidance.
144. Consistent with the MERA Guidance, dispersion modeling was performed at the property line to determine the maximum 1-hour and annual off-property air quality impacts associated with non-criteria pollutant emissions of benzene, gasoline, and ethylene from the CCL Project.

ESL Analysis Results

145. For benzene, the maximum modeled 1-hour average concentration from the CCL Project’s emissions is $184 \mu\text{g}/\text{m}^3$, which is above the 1-hour ESL of $170 \mu\text{g}/\text{m}^3$.
146. The maximum modeled annual average concentration resulting from the CCL Project’s emissions of benzene is $2.4 \mu\text{g}/\text{m}^3$, which is less than the annual ESL of $4.5 \mu\text{g}/\text{m}^3$.
147. For gasoline, the maximum modeled 1-hour average concentration from the CCL Project’s emissions is $6769 \mu\text{g}/\text{m}^3$, which is above the 1-hour ESL of $3500 \mu\text{g}/\text{m}^3$.
148. The maximum modeled annual average concentration resulting from the CCL Project’s emissions of gasoline is $55 \mu\text{g}/\text{m}^3$, which is less than the annual ESL of $350 \mu\text{g}/\text{m}^3$.
149. Benzene and gasoline were further analyzed under the MERA Guidance’s Tier II criteria.
150. For benzene, the maximum modeled 1-hour average concentration from the CCL Project’s emissions is 1.08 times the ESL, which is less than two times the ESL.

151. For benzene, the maximum modeled 1-hour non-industrial ground level concentration is $19 \mu\text{g}/\text{m}^3$, which is less than the 1-hour ESL of $170 \mu\text{g}/\text{m}^3$.
152. For gasoline, the maximum modeled 1-hour average concentration from the CCL Project's emissions is 1.93 times the ESL, which is less than two times the ESL.
153. For gasoline, the maximum modeled 1-hour non-industrial ground level concentration is $1083 \mu\text{g}/\text{m}^3$, which is less than 1-hour ESL of $3500 \mu\text{g}/\text{m}^3$.
154. Impacts from benzene and gasoline are less than two times their respective ESLs and the predicted 1-hour non-industrial ground level concentrations of benzene and gasoline are less than their respective ESLs. This satisfies Tier II Criteria of the MERA Guidance and ends the required analysis.
155. The exceedances of the short-term ESL for benzene and gasoline were approved by TCEQ's Toxicology Division.
156. For ethylene, the maximum modeled 1-hour average concentration from the CCL Project's emissions is $12 \mu\text{g}/\text{m}^3$, which is below the 1-hour ESL for ethylene of $1400 \mu\text{g}/\text{m}^3$.
157. The maximum modeled annual average concentration resulting from the CCL Project's emissions of ethylene is $1 \mu\text{g}/\text{m}^3$, which is less than the annual ESL for ethylene of $34 \mu\text{g}/\text{m}^3$.

ESL Summary

158. No adverse public health or welfare effects would result from the CCL Project's emission of air contaminants for which no specific air quality standards exists.

Additional Impacts Analysis

159. An Additional Impacts Analysis is required to provide an assessment of a project's effect on the overall environment. There are three types of analyses: growth, soil and vegetation, and visibility impairment.
160. The growth analysis evaluates the impact associated with a project on the general commercial, residential, and industrial growth within the area of impact (AOI).
161. The soils and vegetation analysis evaluates the impact associated with a project on soils and vegetation within the AOI.
162. The visibility impairment analysis evaluates the impact associated with a project on the visibility within the AOI, and upon any Class I areas within 100 kilometers (km) of the project.

163. CCL conducted an Additional Impacts Analysis as part of the PSD Air Quality Analysis.
164. CCL conducted a growth analysis and determined that population will not significantly increase as a result of the CCL Project.
165. CCL conducted a soils and vegetation analysis and determined that all evaluated criteria pollutants are below their respective primary and secondary NAAQS.
166. The CCL Project meets the Class II visibility analysis requirement by complying with 30 Texas Administrative Code chapter 111.
167. The ED evaluated predicted concentrations from the CCL Project Site to determine if emissions could adversely affect a Class I area.
168. The nearest Class I area to the CCL Project Site is Big Bend National Park, approximately 570 km from the proposed CCL Project Site.
169. The predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times are all less than *de minimis* levels at a distance of 16 km from the CCL Project Site in the direction of the Big Bend National Park Class I area.
170. Big Bend National Park is an additional 554 km from the location where the predicted concentrations of PM₁₀, PM_{2.5}, NO₂, and SO₂ for all averaging times are less than *de minimis*.
171. Emissions from the CCL Project are not expected to adversely affect the Big Bend National Park Class I area.
172. The ED determined that CCL's Additional Impacts Analysis is reasonable and possible adverse effects from the CCL Project are not expected.

Additional Findings Concerning Air Emissions: 30 Tex. Admin. Code Ch. 111 Standards

173. The CCL Project will comply with all applicable requirements in chapter 111, including the allowable visible emission requirements in 30 Texas Administrative Code § 111.111 and the PM emission rate specified in 30 Texas Administrative Code § 111.151. In addition, CCL will comply with the outdoor burning restrictions in 30 Texas Administrative Code § 111.201.

Summary of Protection of Public Health and Welfare

174. The proposed emissions from the CCL Project will comply with all ambient air contaminant standards and guidelines.

Measurement of Emissions: 30 Tex. Admin. Code § 116.111(a)(2)(B)

- 175. Emissions from any source addressed in the Application will be sampled upon request of the ED, and sampling ports and sampling platforms will be installed as needed.
- 176. The Draft Permit contains appropriate emissions-measuring provisions for each type of emission from each emission point, with consideration given to the relative significance of each and to any applicable emissions measurement requirements of federal programs such as the New Source Performance Standards (NSPS).
- 177. CCL has proposed a proper compliance assurance monitoring plan.

Best Available Control Technology (BACT): 30 Tex. Admin. Code § 116.111(a)(2)(C)

- 178. TCEQ defines BACT as “[a]n air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. The emissions reduction can be achieved through technology such as the use of add-on control equipment or by enforceable changes in production processes, systems, methods, or work practice.”
- 179. EPA defines BACT as “an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated New Source Review [NSR] pollutant that would be emitted from any proposed major stationary source or major modification, which the reviewing authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of BACT result in emissions of any contaminant which would exceed the emissions allowed by any applicable standard under 40 [CFR] parts 60 or 61. If the reviewing authority determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions reduction achievable by implementation of such design, equipment, work practice or operation, and it shall provide for compliance by means that achieve equivalent results.” This definition is used in conducting reviews of pollutants subject to PSD review.

180. TCEQ has provided a guidance document entitled “Air Permit Reviewer Reference Guide, Air Pollution Control (APDG 6110),” setting forth guidance for evaluation of BACT proposals submitted in a NSR air permit application.
181. Under TCEQ’s guidance document relied on by the ED in evaluating BACT, TCEQ uses a tiered analysis approach for BACT involving three different tiers. A Tier I evaluation involves a comparison of the applicant’s BACT proposal to emission reduction performance levels accepted as BACT in recent permit reviews involving the same process or industry, with an evaluation of new technical developments necessary in some cases. A Tier II evaluation involves consideration of controls that have been accepted as BACT in recent permits for similar air emission streams in a different process or industry. A Tier III evaluation is a detailed technical and quantitative economic analysis of all emission reduction options available for the process under the review. The guidance document also notes that the Tier III evaluation is rarely necessary because technical practicability and economic reasonableness have usually been firmly established by industry practice as identified in the first two tiers.
182. EPA has provided a draft guidance document entitled “1990 NSR Workshop Manual,” setting forth guidance for evaluation of BACT proposals submitted in a New Source Review air permit application.
183. Under EPA’s draft guidance document, a top-down process is used for BACT evaluations and provides that all available control technologies be ranked in descending order of achievable emission limitations. The applicant first examines the most stringent, or “top,” alternative. That alternative is established as BACT unless the applicant demonstrates, and the permitting authority in its informed judgment agrees, that technical considerations, or energy, environment, or economic impacts justify a conclusion that the most stringent technology is not “achievable” in that case. If the most stringent technology is eliminated in this fashion, then the next most stringent alternative is considered, and so on.
184. Under TCEQ’s guidance, either EPA’s top-down methodology or TCEQ’s tiered BACT review may be used because both result in the same BACT determination.

BACT and the CCL Project

185. The PSD rules expressly require BACT for the proposed stationary source, which in turn is defined as a discrete collection of pollutant-emitting activities. The definition of BACT requires consideration of inherently lower-polluting production processes, but only to the extent that those lower-polluting processes can be applied to the collection of pollutant-emitting activities proposed by the applicant.

186. The TCEQ definition of BACT requires a control method that applies to the proposed “facility.” According to the EPA definition of BACT, BACT is applied to “a particular emission unit.”
187. The starting point for CCL’s case-specific BACT analysis was the gas-fired turbines it proposed based on its fundamental business objectives.
188. The CCL Project will use the ConocoPhillips Optimized Cascade® Process to produce LNG in three ConocoPhillips Optimized Cascade® Process liquefaction trains. Each LNG train at CCL will require the use of six aero-derivative GE LM2500+G4 Singular Annular Combustor (SAC) turbines to drive compressors, which in turn compress refrigerants in a cycle that results in the cooling of treated natural gas. Two turbines in each train will drive propane refrigeration compressor sets, two turbines will drive ethylene refrigeration compressor sets, and two turbines will drive methane refrigeration compressor sets.
189. The ConocoPhillips Optimized Cascade® Process was chosen for the CCL Project to accomplish CCL’s fundamental business objectives. CCL selected this process for many reasons, including: only this LNG process has a successful track record using aeroderivative gas-fired turbines, which are more fuel efficient than the industrial heavy-duty gas-fired turbines used in other processes; the design provides a wide range of production rates because of the 2+2+2 refrigerant compressor configuration (for example, CCL can run only half the compressors very efficiently if market demands require a temporary reduction in LNG production); during shutdowns of the ConocoPhillips Optimized Cascade® Process liquefaction trains, CCL can maintain the refrigerants in storage under pressure, without having to vent or flare; and CCL can take advantage of a standardized, proven “template” design developed by ConocoPhillips and CCL’s contractor Bechtel. This design has been well proven, fits the limited area available at the CCL Project Site, produces about 4.5 million tonnes of LNG per year (which matches CCL’s marketing plans), reduces engineering, construction, and maintenance costs, and duplicates the design being used by CCL’s affiliated company at the Sabine Pass Liquefaction (SPL) project (as well as at other similar plants currently operating and under construction outside the United States).
190. Given the selection of the ConocoPhillips Optimized Cascade® Process, the amount of LNG CCL wanted to produce, the amount of power required to compress enough refrigerant to cool this amount of LNG, the expected feed gas compositions and delivery pressures at the Project Site, the historical ambient temperatures, the size of the Project Site, the fuel efficiencies and reliabilities required, environmental considerations, and other influencing factors, CCL selected the LM2500+G4 SAC gas-fired turbine as the best fit for the CCL Project.
191. For each ConocoPhillips Optimized Cascade® Process liquefaction train, a total of fourteen centrifugal compressors all must operate in concert with one another (as well as

with the hundreds of other pieces of equipment) in order to achieve efficient and safe production of LNG. All fourteen compressors are tied together through a system of heat exchangers, pressure vessels, piping, valves, and other equipment in a process that feeds each other at various pressures, temperatures, and flows.

192. CCL's BACT analysis considered both TCEQ and EPA definitions of BACT and used EPA's top-down methodology for its BACT evaluation. The ED also evaluated CCL's BACT determination using TCEQ's tiered BACT methodology.
193. CCL's BACT analysis included an evaluation of recent permit reviews of similar LNG facilities, including the SPL site in Louisiana.
194. CCL's BACT analysis considered information from EPA's RACT/BACT/LAER Clearinghouse and other permitting databases, and, where appropriate, actual performance data and vendor information for similar sources, in order to determine what emissions limitations are achievable for the CCL Project.
195. BACT is a case-by-case review specific to the proposed stationary source being permitted. A BACT analysis begins with establishing the context for the analysis by identifying the fundamental objectives and design of the proposed stationary source. This context is necessary to determine the facilities for which BACT determinations are necessary.
196. Construction of a power-plant or obtaining electricity from the grid to power electric motors to drive CCL's compressors in lieu of the proposed gas-fired turbines is not a production process or a control technology that can be applied to the source of emissions proposed by CCL.
197. Requiring electrically-driven compression is a replacement of the proposed source, and therefore, would require CCL to re-design the proposed facility.
198. TCEQ has determined that, based on current regulations, policies, and practices, an applicant that proposes to construct a source is not required to include other alternative designs in its BACT analysis because that would require the applicant to redesign the proposed source of emissions.
199. Other proposed LNG facilities using different LNG liquefaction processes were not considered similar sources in CCL's BACT review. Nevertheless, CCL considered other LNG facilities and sources using gas-fired turbines to identify all feasible control technologies.
200. CCL's BACT analysis was complete and performed in accordance with TCEQ and EPA guidance and rules.

201. Based on the BACT analysis contained in the Application and other information available to the ED, the ED rendered a proper BACT determination for the CCL Project as described in the Preliminary Determination Summary.
202. The following table summarizes the control technologies and BACT emission limits (identified in the Maximum Achievable Emission Rate Table (MAERT) in the Draft Permit) applicable at the CCL Project:

Source(s)	Contaminant	Control technology	Emission rate
Turbines	NO _x	Water injection; good combustion conditions and practices	25 ppm MAERT
	CO	Good combustion conditions and practices	29 ppm MAERT
	VOC	Good combustion conditions and practices; use of pipeline-quality natural gas	MAERT
	PM, PM ₁₀ , PM _{2.5}	Good combustion conditions and practices; use of pipeline-quality natural gas	MAERT
	SO ₂ ; H ₂ S	Use of pipeline-quality natural gas with minimal sulfur content	MAERT
Amine Treatment System	VOC	Use of thermal oxidizers to achieve 99.9% control	MAERT
	H ₂ S	Use of thermal oxidizers to achieve 99% control	
Thermal Oxidizer	NO _x	Low NO _x burners; good combustion conditions and practices	0.06 lb/MMBtu MAERT
	CO, PM, PM ₁₀ , PM _{2.5}	Good combustion conditions and practices; minimum operating temperature of 1400 degrees F	MAERT
Flares (normal and MSS)	NO _x , CO, VOC, SO ₂ , H ₂ S	Meet 40 CFR § 60.18, except for marine flare when inert gas is being vented during ship purging	MAERT
Condensate Tank	VOC	Internal floating roof; painted white	MAERT
Amine and Diesel Storage Tanks	VOC	Fixed roof tank; use of submerged fill pipe, low vapor pressure compounds	MAERT
Gasoline Storage Tank	VOC	Fixed roof tank; use of submerged fill pipe, small capacity	MAERT
Truck Loading Operations	VOC	Submerged fill loading with dedicated normal service	MAERT
Marine Loading/	VOC	Control with a flare; recovery of	MAERT

Source(s)	Contaminant	Control technology	Emission rate
Unloading Operation		emissions to the process	
Standby Generators and Firewater Pumps	NO _x , CO, VOC, SO ₂ , PM, PM ₁₀ , PM _{2.5}	Engines which meet 40 CFR 60, Subpart IIII; limited standby generators to 27 hours of non-emergency operation per year and firewater pumps to 52 hours of non-emergency operation per year; ultra-low sulfur diesel fuel	MAERT
Fugitive emissions from equipment leak	VOC	28VHP Leak Detection and Repair	6.78 lbs/hr MAERT

203. No technical developments in control technologies that are both technically practicable and economically reasonable offer the potential for further emissions reductions from the CCL Project.

BACT for the Gas-Fired Turbines

204. BACT for NO_x emissions from the gas-fired turbines will be water injection to achieve an emissions limitation of 25 parts per million by volume (ppmv) at 15% oxygen (O₂) on a 1-hour average basis to be demonstrated by stack testing and a 4-hour averaging period for NO_x to be demonstrated by fuel-to-water ratio monitoring except for periods of MSS.
205. Selective Catalytic Reduction (SCR) technology has not been demonstrated in practice for an LNG facility. CCL examined the technical feasibility of applying SCR to the gas-fired turbines at the CCL Project and obtained detailed cost-estimates for developing a “first of its kind” SCR application.
206. Based on EPA’s control cost estimating methodology and cost estimates from the engineering and construction contractor and vendor, applying SCR would not be economically reasonable and therefore would not be required for BACT. The estimated \$22,500 cost per ton of reducing NO_x exceeds TCEQ’s \$10,000 per ton reduced threshold for economic reasonableness used with BACT determinations.
207. BACT for CO emissions from the gas-fired turbines will be the use of good combustion practices to achieve an emissions limitation of 29 ppmv.
208. The use of oxidation catalyst for CO is not BACT based on the same reasons SCR was rejected as BACT because oxidation catalyst is always paired with SCR.

- 209. BACT for PM/PM₁₀/PM_{2.5} emissions from the gas turbines includes (1) the use of clean fuel/low ash fuel/low sulfur fuel, and (2) good combustion practices to achieve an emissions limit of 0.72 pounds per hour (lbs/hour).
- 210. BACT for VOC emissions from the gas-fired turbines is good combustion practices to achieve an emissions limit of 0.60 lbs/hour.

BACT for Thermal Oxidizers

- 211. Good combustion practices/optimized air to fuel ratios will be used to achieve a CO emission limit of 1.50 lbs/hour from the thermal oxidizers.
- 212. Clean fuel and good combustion practices will achieve a PM/PM₁₀/PM_{2.5} emissions limit of 0.21 lbs/hour from the thermal oxidizers.
- 213. BACT for SO₂ emissions from the thermal oxidizers is an emissions limit of 0.74 lbs/hour.

BACT for Flares

- 214. CCL's elevated flare system will consist of a marine flare and two wet/dry flares. None of the flares will be steam-assisted.
- 215. Applicant will comply with BACT for NO_x and CO from the flares by meeting 40 CFR § 60.18 requirements (except when the marine flare receives inert gases during ship purging) and by maintaining good combustion practices to achieve emissions limits of 1.35 lbs/hour and 11.56 lbs/hour, respectively.
- 216. The wet/dry flares will be operated with a flame present at all times and/or will have a constant pilot flame, which will be continuously monitored by thermocouple or an infrared monitor. The marine flare will be operated with a flame present at all times when ships are connected to the vapor transfer arm. When in use, the marine flare will be continuously monitored by thermocouple or an infrared monitor.
- 217. The elevated flares are designed with destruction and removal efficiency of 99% for hydrocarbons with three or fewer carbon atoms and 98% for hydrocarbons with more than three carbon atoms. These destruction efficiencies are based on long-standing TCEQ guidance and are BACT.
- 218. The Applicant will satisfy its permit conditions, including destruction efficiencies, with respect to flares. In accordance with the Draft Permit, CCL may operate its flares in wind, provided that the flares continue to operate with no visible emissions except periods not to exceed a total of five minutes during any two consecutive hours.

BACT for Standby Generators and Firewater Pumps

- 219. BACT for NO_x emissions from the standby generators and firewater pump engines include (1) turbochargers and aftercoolers and (2) good combustion practices to achieve emissions limits of 9.42 and 2.90 lbs/hour, respectively.
- 220. BACT for CO emissions from the standby generators and firewater pump engines is good combustion practices to achieve emissions limits of 1.48 and 0.69 lbs/hour, respectively.
- 221. BACT for VOC emissions from the standby generators and firewater pump engines is good combustion practices to achieve emissions limits of 0.51 and 0.08 lbs/hour, respectively.
- 222. BACT for PM/PM₁₀/PM_{2.5} emissions from the diesel standby generators and firewater pump engines include (1) the use of ultra low sulfur diesel as fuel and (2) good combustion practices to achieve emissions limits of 0.13 and 0.10 lbs/hour, respectively.

BACT for Storage Tanks

- 223. BACT for VOC emissions from the diesel storage tanks, amine storage tank, and the gasoline storage tank is the use of submerged fill pipes to achieve emissions limits of 0.07, 0.01, and 17.38 lbs/hour.

BACT for Fugitive Emissions from Equipment Leaks

- 224. The CCL Project is designed to minimize leaks.
- 225. It is not technically feasible or prudent from a safety or maintenance perspective to apply “leakless” components to all components at the CCL Project. Leakless components are not technically feasible throughout the entire CCL Project.
- 226. CCL has minimized the number of components that can leak. It is the general engineering and construction practice in the LNG industry to reduce emissions from the various components of the facility for safety and maintenance purposes.
- 227. As shown by the ED’s Tier 1 BACT review, the 28VHP Leak Detection and Repair (LDAR) program will result in estimated VOC emissions of 6.78 lbs/hr and this program is BACT for fugitive emissions from the CCL Project.
- 228. The determination to use the 28VHP LDAR program to meet BACT requirements is based on long-standing TCEQ guidance on fugitive emissions from piping and equipment leaks. TCEQ spent many years developing a standardized set of LDAR programs that are BACT, and many previous BACT determinations have been made using this guidance.

- 229. There are no technical developments that would provide additional emission reductions and that are economically or technically reasonable in a BACT review for equipment leak fugitives from the CCL Project.
- 230. The 28LAER LDAR program is a requirement for nonattainment areas and is not required as part of the BACT review. That program was designed for nonattainment areas as part of a lowest achievable emission rate technology review, which does not apply to the Corpus Christi area, which is in attainment for all pollutants.

BACT for Maintenance, Startup, and Shutdown

- 231. The lbs/hr and tons per year (tpy) limits applicable to the CCL Project will be met during MSS operations. MSS emissions at the CCL Project will occur from the wet/dry flares. Therefore, BACT for those emission sources is BACT for MSS emissions.

BACT Summary

- 232. CCL prepared a complete and appropriate BACT analysis that satisfied all applicable state and federal requirements for each contaminant to be emitted from each emission point for which such an analysis was required.
- 233. The emission limitations proposed by CCL and determined by the ED for the CCL Project are BACT.

NSPS: 30 Tex. Admin. Code § 116.111(a)(2)(D)

- 234. CCL's Application accurately and completely delineates the requirements of all applicable NSPS as they apply to the CCL Project generally. The following NSPS subparts apply to affected sources at the CCL Project: Subpart A - General Provisions; Subpart KKKK - Stationary Combustion Turbines; and Subpart IIII - Stationary Compression Ignition Internal Combustion Engines.
- 235. The CCL Project is expected to meet all applicable NSPS.
- 236. Compliance with all applicable NSPS requirements is a condition of the Draft Permit.

NESHAPs: 30 Tex. Admin. Code § 116.111(a)(2)(E)

- 237. There are no national emission standards for hazardous air pollutants (NESHAPs) applicable to facilities of the type comprising the CCL Project.

NESHAPs for Source Categories: 30 Tex. Admin. Code § 116.111(a)(2)(F)

- 238. The following requirements for NESHAPs for source categories, or Maximum Achievable Control Technology (MACT) standards, will apply: Subpart A - General

Provisions; Subpart EEEE - Organic Liquid Distribution; Subpart YYYY - Stationary Combustion Turbines; and Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines.

Performance Demonstration: 30 Tex. Admin. Code § 116.111(a)(2)(G)

- 239. The Draft Permit contains provisions for demonstrating achievement of the performance specified in the Application once the CCL Project is constructed and operating.
- 240. Provisions for demonstrating achievement of the performance specified in the Application will adequately demonstrate the performance of the CCL Project.

Nonattainment Review: 30 Tex. Admin. Code § 116.111(a)(2)(H)

- 241. The CCL Project Site is located in San Patricio and Nueces Counties, which are not located in a designated nonattainment area.
- 242. Because the CCL Project will not be located in an area that is a designated nonattainment area for any air contaminant, the CCL Project is not subject to nonattainment review requirements.

PSD Review: 30 Tex. Admin. Code § 116.111(a)(2)(I)

- 243. The Application included information and analyses that comply with the applicable requirements of 30 Texas Administrative Code chapter 116 and 40 CFR part 52.
- 244. The CCL Project is subject to PSD review for the following pollutants, which may be emitted in “significant” quantities, as defined in 40 CFR § 52.21(b)(23): CO, NO_x, PM/PM₁₀/PM_{2.5}, VOC, and ozone.
- 245. The PSD analysis was complete and included all information necessary for the ED to render a PSD determination for the CCL Project.
- 246. CCL conducted a source impact analysis showing that allowable emissions from the CCL Project will not cause or contribute to air pollution in violation of any NAAQS or PSD increment.
- 247. CCL conducted an appropriate additional impacts analysis that assessed the potential impairment to visibility, soils, and vegetation as a result of the CCL Project and associated commercial, residential, and industrial growth, and assessed air quality impacts as a result of such growth.
- 248. The CCL Project will not significantly increase population within the AOI.

- 249. Modeling of the CCL Project's emissions shows concentrations that will be protective of soils and vegetation.
- 250. The CCL Project will not have adverse impacts on visibility since the nearest Class I area is more than 500 km away and because the project will comply with chapter 111 limits.

Air Dispersion Modeling or Ambient Monitoring: 30 Tex. Admin. Code § 116.111(a)(2)(J)

- 251. CCL performed air dispersion modeling in order to demonstrate the air impacts from the CCL Project.

Hazardous Air Pollutants (HAPs): 30 Tex. Admin. Code § 116.111(a)(2)(K)

- 252. New sources for affected HAPs at the CCL Project are subject to MACT standards under 40 CFR part 63. Therefore, they are not affected sources as defined in 30 Tex. Admin. Code § 116.115(1) and this section does not apply.

Mass Emissions Cap and Trade Allowances: 30 Tex. Admin. Code § 116.111(a)(2)(L)

- 253. Mass emissions cap and trade allowance provisions do not apply to the CCL Project.

Permit

- 254. The MAERT in the Draft Permit accurately identifies all emissions sources and air contaminant emission rates for the CCL Project.
- 255. The CCL Project as planned will comply with the emission limits specified in the Draft Permit's MAERT.
- 256. The CCL Project can be operated to meet the requirements of the Draft Permit, all applicable TCEQ air quality rules and regulations, and the intent of the Texas Clean Air Act (TCAA).

Transcription Costs

- 257. The parties initially estimated that the hearing on the merits would last five days, and the ALJ ordered CCL to arrange for and pay for an expedited transcript. The actual hearing on the merits lasted approximately 1 and 1/2 days.
- 258. Sierra Club is a national non-profit, public interest organization with an ability to pay the transcription costs.
- 259. CCL is an applicant proposing a multi-billion project with an ability to pay the transcription costs.

260. Both CCL and Sierra Club participated fully in the hearing. Both parties raised significant issues, presented direct cases, and engaged in cross-examination. Both parties sought to protect important interests and benefited from the use of a transcript in advocating their positions.
261. Transcription costs of \$1,501.50 should be allocated equally between CCL and Sierra Club, with both parties paying \$750.75.

Other Remaining Issues

262. With respect to all other contested issues and all uncontested and unrefined issues, the Application and the remainder of the evidentiary record contain sufficient factual information to satisfy all applicable statutory and regulatory requirements.

II. CONCLUSIONS OF LAW

1. The Commission has jurisdiction over CCL's Application pursuant to Texas Health and Safety Code chapter 382 and Texas Water Code chapter 5.
2. CCL's Application was directly referred to SOAH pursuant to Texas Water Code § 5.557.
3. Pursuant to Texas Government Code § 2003.047, SOAH has jurisdiction to conduct a hearing and to prepare a proposal for decision in this matter.
4. Proper notice of CCL's Application was provided. Tex. Health & Safety Code §§ 382.0516, 382.0517, 382.056; Tex. Gov't Code §§ 2001.051, 2001.052; and 30 Tex. Admin. Code § 39.601, *et seq.*
5. CCL properly submitted a complete Application pursuant to Texas Health and Safety Code §§ 382.0515 and 382.0518 and 30 Texas Administrative Code §§ 116.110, 116.111, 116.140, and 116.404.

Affected Person Status and Associational Standing

6. Sierra Club has the burden of proof to show it has a member who would otherwise have standing to request a hearing in their own right. 30 Tex. Admin. Code § 55.205.
7. Pursuant to 30 Texas Administrative Code § 55.203, affected person status is a prerequisite to participating in a contested case hearing. Associations must base their standing upon an affected member. Affected person status requires a personal justiciable interest in the controversy. An interest common to members of the general public does not qualify as a personal justiciable interest. 30 Tex. Admin. Code § 55.203(a).

8. The test to establish standing does not require a party to show that it will ultimately prevail in the litigation; the test requires the party to show only that it will potentially suffer harm or have a justiciable interest related to the proceedings. *Heat Energy Advanced Tech. v. West Dallas Coal. For Envtl. Justice*, 962 S.W.2d 288, 295 (Tex. App.—Austin 1998, pet. denied).
9. A person does not have to conclusively prove that his health, safety, or property will be affected. He need only indicate that the potential exists that he will be affected by the proposed project. *United Copper Indus., Inc. v. Grissom*, 17 S.W.3d 797, 803 (Tex. App.—Austin 2000, pet. dism'd).
10. As demonstrated by CCL's failure to object at the preliminary hearing, Peter Davidson is an affected person. He has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. 30 Tex. Admin. Code § 55.203.
11. Sierra Club met the requirements for associational standing based on Mr. Davidson's membership in the organization and status as an affected person. 30 Tex. Admin. Code § 55.205(a).
12. Alvin Baker is an affected person. He has a personal justiciable interest related to a legal right, duty, privilege, power, or economic interest affected by the application. 30 Tex. Admin. Code § 55.203.
13. Sierra Club met the requirements for associational standing based on Mr. Baker's membership in the organization and status as an affected person. 30 Tex. Admin. Code § 55.205(a).

Burden of Proof

14. Pursuant to 30 Texas Administrative Code §§ 55.210 and 80.17(a), in a contested case hearing involving an air quality permit application that has been directly referred, the burden of proof is on the applicant to prove by a preponderance of the evidence that the application satisfies all statutory and regulatory requirements.
15. CCL has met its burden of proof to demonstrate that the Application satisfies all applicable statutory and regulatory requirements.

TCAA Standards

16. Under the TCAA, CCL may not construct the CCL Project until it has obtained a permit from the Commission. Tex. Health & Safety Code § 382.0518(a).
17. The CCL Project will use at least the best available control technology, considering the technical practicability and economic reasonableness of reducing or eliminating the

emissions resulting from the facility and there is no indication that the emissions from the CCL Project will contravene the intent of the TCAA, including the protection of the public's health and physical property. Tex. Health & Safety Code § 382.0518(b).

18. CCL has made all demonstrations required under applicable federal and state laws and regulations to be issued an air quality permit.

Definition of a Source

19. TCEQ rules define a "site" for air permitting purposes as: "[t]he total of all stationary sources located on one or more contiguous or adjacent properties, which are under common control of the same person (or persons under common control). . . ." 30 Tex. Admin. Code § 122.10(27).
20. The CCL Project is not "contiguous or adjacent" to the two compressor stations proposed by Cheniere Corpus Christi Pipeline, L.P. to be located near Taft, Texas, and Sinton, Texas. Therefore, the CCL Project and the compressor stations are not a single "site" or stationary source for air permitting purposes.

BACT

21. TCEQ rules define BACT as "[a]n air pollution control method for a new or modified facility that through experience and research, has proven to be operational, obtainable, and capable of reducing or eliminating emissions from the facility, and is considered technically practical and economically reasonable for the facility. The emissions reduction can be achieved through technology such as the use of add-on control equipment or by enforceable changes in production processes, systems, methods, or work practice." 30 Tex. Admin. Code § 116.10(1).
22. EPA regulations define BACT as "an emissions limitation (including a visible emissions standard) based on the maximum degree of reduction for each regulated NSR pollutant that would be emitted from any proposed major stationary source or major modification, which the reviewing authority, on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, determines is achievable for such source or modification through application of production processes or available methods, systems, and techniques, including fuel cleaning or treatment or innovative fuel combustion techniques for control of such pollutant. In no event shall application of BACT result in emissions of any contaminant which would exceed the emissions allowed by any applicable standard under 40 CFR parts 60 or 61. If the reviewing authority determines that technological or economic limitations on the application of measurement methodology to a particular emissions unit would make the imposition of an emissions standard infeasible, a design, equipment, work practice, operational standard, or combination thereof, may be prescribed instead to satisfy the requirement for the application of BACT. Such standard shall, to the degree possible, set forth the emissions

reduction achievable by implementation of such design, equipment, work practice or operation, and it shall provide for compliance by means that achieve equivalent results.” 30 Tex. Admin. Code § 116.160; 40 CFR § 51.165(a)(1)(xl). This definition is used in conducting reviews of pollutants subject to PSD review.

23. BACT requires a control method that applies to the proposed “facility.” According to the EPA definition of BACT, BACT is applied to “a particular emission unit.”
24. An alternative facility or unit, such as a different type of gas-fired turbine or different means of powering the refrigeration compressors, is not a control technology that can be applied to the facility and emission source proposed by CCL.
25. BACT does not require an applicant to consider alternative designs that would re-define the source. *Sierra Club v. EPA*, 499 F.3d 653, 655-6 (7th Cir. 2007); *Blue Skies Alliance v. Texas Comm’n on Env’tl Quality*, 283 S.W.3d 525, 537 (Tex. App.—Amarillo 2009, no pet.).
26. Consideration of electrically-driven compression would constitute a redefinition of the source because it is not a control technology that can be applied to CCL’s proposed source. *Blue Skies Alliance v. Texas Comm’n on Env’tl Quality*, 283 S.W.3d 525, 537 (Tex. App.—Amarillo 2009, no pet.).
27. In accordance with Texas Health and Safety Code § 382.0518 and 30 Texas Administrative Code §§ 116.111(a)(2)(C) and 116.160, the CCL Project will utilize BACT, with consideration given to the technical practicability and economic reasonableness of reducing or eliminating emissions from its facilities.
28. The definition of BACT specifically requires that an emissions limitation be “achievable.” 30 Tex. Admin. Code § 116.160; 40 CFR § 51.165(a)(1)(xl).
29. A useful indicator of achievability is whether compliance with that same limit has been demonstrated continuously, in practice, by a similar facility.
30. Technologies which have not yet been applied to (or permitted for) full scale operations need not be considered available; an applicant may to purchase or construct a process or control device that has already been demonstrated in practice.

NAAQS and PSD

31. In the federal Clean Air Act (FCAA), Congress directed EPA to adopt NAAQS. 42 U.S.C. § 7409(a).
32. The current NAAQS, as set out in 40 CFR part 50, are listed below:

NAAQS - Primary Standards			NAAQS - Secondary Standards	
Pollutant	Level	Averaging Time	Level	Averaging Time
Carbon Monoxide	9 ppm (10 mg/m ³)	8-hour	None	
	35 ppm (40 mg/m ³)	1-hour		
Lead	0.15 µg/m ³	Rolling 3-Month Average	Same as Primary	
Nitrogen Dioxide	0.053 ppm (100 µg/m ³)	Annual (Arithmetic Mean)	Same as Primary	
	.1 ppm (188 µg/m ³)	1-Hour		
PM ₁₀	150 µg/m ³	24-hour	Same as Primary	
PM _{2.5}	12.0 µg/m ³	Annual (Arithmetic Mean)	15.0 µg/m ³	Annual (Arithmetic Mean)
	35 µg/m ³	24-hour	Same as Primary	
Ozone	0.075 ppm (147 µg/m ³)	8-hour (Annual fourth-highest daily maximum 8-hr concentration, averaged over 3 years)	Same as Primary	
Sulfur Dioxide	0.075 ppm (196 µg/m ³)	1-Hour (Arithmetic Mean)	0.5 ppm (1300 µg/m ³)	3-hour

33. The Commission adopted the NAAQS by reference and specified that they be enforced throughout Texas. 30 Tex. Admin. Code § 101.21.
34. Under 30 Texas Administrative Code § 116.111(a)(2)(I), a proposed facility located in a NAAQS attainment area must comply with all applicable requirements of 30 Texas Administrative Code chapter 116 concerning PSD review.
35. TCEQ rule 30 Texas Administrative Code § 116.161 provides:

The commission may not issue a permit to any new major stationary source or major modification located in an area designed as attainment or unclassifiable, for any National Ambient Air Quality Standard (NAAQS)

under FCAA, § 107, if ambient air impacts from the proposed source would cause or contribute to a violation of any NAAQS. In order to obtain a permit, the source must reduce the impact of its emissions upon air quality by obtaining sufficient emission reductions to eliminate the predicted exceedances of the NAAQS. A major source or major modification will be considered to cause or contribute to a violation of a NAAQS when the emissions from such source or modification would, at a minimum, exceed the *de minimis* impact levels specified in § 101.1 of this title (relating to Definitions) at any locality that is designed as nonattainment or is predicted to be nonattainment for the applicable standard.

36. Section § 116.160, title 30 of the Texas Administrative Code adopts by reference EPA's rules at 40 CFR § 52.21. In relevant part, 40 CFR § 52.21(k)(1) states the following:

Source Impact Analysis. The owner or operator of the proposed source . . . shall demonstrate that allowable emission increases from the proposed source . . . , in conjunction with all other applicable emission increases or reductions (including secondary emissions), would not cause or contribute to air pollution in violation of:

- (1) Any national air quality standard in any air quality control region;
or
- (2) Any applicable maximum allowable increase over the baseline concentration in any area.

37. The CCL Project is a federal major source by itself because it emits more than 100 tpy of any single federally regulated new source review pollutant; therefore, PSD review is required.
38. In accordance with 30 Texas Administrative Code §§ 116.111(a)(2)(I) and 116.160, *et. seq.*, an application for a PSD permit was properly prepared and submitted by CCL to establish federally enforceable PSD emission limits for the CCL Project.
39. Congress has set increments for PM and for SO₂. 42 U.S.C. § 7473.
40. EPA in 1987 amended the particulate increment to specify that PM smaller than 10 microns in diameter (*i.e.*, PM₁₀) would be the subset of PM regulated by the increment. 52 Fed. Reg. 24,634 (Jul. 1, 1987). EPA later set separate increments for PM smaller than 2.5 microns in diameter (*i.e.*, PM_{2.5}). 75 Fed. Reg. 64,864 (Oct. 20, 2010). EPA also set increments for NO₂, a pollutant for which Congress had not initially set any increments. 53 Fed. Reg. 40,656-40,670-72 (Oct. 17, 1988).

41. When the maximum modeled concentration of a contaminant from a project is less than the EPA SIL or TCEQ *de minimis* level, it is unnecessary to incorporate background levels or emissions from other sources in the area in the analysis of that pollutant because the maximum predicted concentration level is insignificant.
42. EPA has established SILs and TCEQ has established *de minimis* levels for NO₂, CO, SO₂, PM_{2.5}, and PM₁₀.
43. If the maximum modeled concentrations resulting from emissions of a contaminant from a project are predicted to be insignificant (*i.e.*, below the applicable EPA SIL and TCEQ *de minimis* level for that contaminant and averaging time), then the NAAQS and PSD increment analyses for that contaminant are complete and the project is presumed not to cause or contribute to a violation of the NAAQS or PSD increment for that contaminant and averaging time.
44. The United States Court of Appeals for the District of Columbia Circuit vacated and remanded the PM_{2.5} SIL provisions formerly located at 40 CFR § 51.166(k)(2) and 40 CFR § 52.21(k)(2) on January 22, 2013. *Sierra Club v. EPA*, 705 F.3d 458 (D.C. Cir. 2013).
45. The PM_{2.5} SIL provisions vacated in *Sierra Club v. EPA*, 705 F.3d 458 (D.C. Cir. 2013), may continue to be used as part of a demonstration that a project does not cause or contribute to a violation of the NAAQS.
46. The PSD application for the CCL Project is complete and complies with all applicable requirements for a PSD permit found in 30 Texas Administrative Code chapter 116 and 40 CFR part 52 regarding PSD review.
47. The emissions from the CCL Project will not cause or contribute to a violation of any NAAQS or PSD increments or impair visibility, soils, or vegetation.
48. Nonattainment review requirements are not applicable to the CCL Project.

Sulfur Compound Rules

49. Chapter 112 of the TCEQ's rules establishes property-line standards for sulfur compounds SO₂ and H₂S. The 30 Texas Administrative Code chapter 112 standards are the maximum off-property ground-level concentrations of those compounds that are allowed from all emissions sources on a site. The standards are set out below:

State Property-Line Standard		
Pollutant	Averaging Period	µg/m³
SO ₂	1-Hour	1021
H ₂ S	1-Hour	108

50. Emissions from the CCL Project will not result in an exceedance of the chapter 112 rules for SO₂ and H₂S.

Air Pollution

51. The intent of the TCAA is set out in Texas Health and Safety Code § 382.002(a), which provides:

The policy of this state and the purpose of [the TCAA] are to safeguard the state's air resources from pollution by controlling or abating air pollution and emissions of air contaminants, consistent with the protection of public health, general welfare, and physical property, including the esthetic enjoyment of air resources by the public and the maintenance of adequate visibility.

52. Air pollution is defined by Texas Health and Safety Code § 382.003(3) as follows:

“Air pollution” means the presence in the atmosphere of one or more air contaminants or combination of air contaminants in such concentration and of such duration that:

- (1) are or may tend to be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property; or
- (2) interference with the normal use or enjoyment of animal life, vegetation, or property.

53. In accordance with Texas Health and Safety Code § 382.0518(b)(2), emissions from the CCL Project will not contravene the intent of the TCAA and will be protective of the public's health and physical property, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.
54. The proposed emissions from the CCL Project will not cause or contribute to air pollution.
55. The proposed emissions from the CCL Project will not cause adverse public health or welfare effects, including nuisance conditions.

Other TCEQ Rules

56. CCL's application is subject to and complies with TCEQ rules in the following chapters of title 30 of the Texas Administrative Code:
- Chapter 101 - General Rules
 - Chapter 111 - Control of Air Pollution from Visible Emissions and Particulate Matter
 - Chapter 112 - Control of Air Pollution from Sulfur Compounds
 - Chapter 113 - Control of Air Pollution for Hazardous Air Pollutants and for Designated Facilities and Pollutants
 - Chapter 114 - Control of Air Pollution from Motor Vehicles
 - Chapter 115 - Control of Air Pollution from Volatile Organic Compounds (VOC)
 - Chapter 118 - Control of Air Pollution Episodes
 - Chapter 122 - Federal Operating Permits Program
57. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(B), the CCL Project will have provisions for measuring the emission of air contaminants as determined by the ED.
58. CCL Project facilities, including the gas-fired turbines, storage tanks and stand-by engines, will be subject to applicable provisions of four NSPS Subparts: Subpart A-General Provisions, Subpart KKKK - Stationary Combustion Turbines, Subpart Kb, and Subpart IIII - Stationary Compression Ignition Internal Combustion Engines.
59. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(D), the CCL Project will meet the requirements of any applicable NSPS as listed under 40 CFR part 60, promulgated by EPA under authority granted under section 111 of the FCAA, as amended.
60. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(F), the emissions from the CCL Project will meet the requirements of any applicable MACT standards as listed under 40 CFR part 63, promulgated by EPA under authority granted under section 112 of the FCAA (relating to NESHAPs), as amended, or as listed under 30 Texas Administrative Code chapter 116.
61. The following NESHAP subparts are applicable to the CCL Project: Subpart A - General Provisions; Subpart EEEE - Organic Liquid Distribution; Subpart YYYY - Stationary Combustion Turbines; Subpart ZZZZ - Stationary Reciprocating Internal Combustion Engines.

62. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(G), the CCL Project will achieve the performance specified in the Application.
63. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(J), air dispersion modeling was performed as required to determine the air impacts from the CCL Project.
64. The requirement set forth at 30 Texas Administrative Code § 116.111(a)(2)(L) is not applicable to the CCL Project.
65. No pre-construction or post-construction ambient air monitoring for any federally-regulated new source review pollutant from the CCL Project is required because either CCL's maximum modeled concentrations were below PSD monitoring significance levels or existing, representative background monitoring data was available.
66. The proposed emissions from the CCL Project will comply with the opacity limits and particulate matter emission rates set forth in 30 Texas Administrative Code chapter 111 concerning control of air pollution from visible emissions and particulate matter.
67. All motor vehicles owned or operated by CCL will comply with the requirements set forth in 30 Texas Administrative Code chapter 114, including maintenance and operation of air pollution control systems or devices, inspection requirements, equipment evaluation procedures for vehicle exhaust gas analyzers, and use of oxygenated fuels.
68. The CCL Project will comply with all applicable requirements set forth in 30 Texas Administrative Code chapter 115 and will be operated in compliance with the standards, recordkeeping and reporting requirements associated with these regulations.
69. The CCL Project is not subject to the rules set forth in 30 Texas Administrative Code chapter 117 regarding the control of NO_x because it will be located in San Patricio and Nueces Counties, which are currently in attainment.
70. The CCL Project is required to operate in compliance with any orders of the Commission relating to generalized and localized air pollution episodes under 30 Texas Administrative Code chapter 118.
71. The CCL Project is not subject to the emission reduction plan requirements of 30 Texas Administrative Code chapter 118.

CCL's Permit

72. CCL's Application is complete, and CCL has made all demonstrations required for approval and issuance of a state air quality permit.
73. In accordance with 30 Texas Administrative Code § 116.111(a)(2)(A)(i), emissions from the CCL Project, as modified by this Order, will comply with all Commission rules and

regulations and the intent of the TCAA, including protection of the health and property of the public, consistent with the long-standing interpretation of the Commission's rules, regulations, and guidance.

74. In accordance with 30 Texas Administrative Code § 101.4, the CCL Project will not cause any nuisance conditions.
75. The Draft Permit prescribes requirements for demonstrating initial and ongoing compliance with all applicable requirements of the Draft Permit and the TCAA.
76. The special conditions in the permit are appropriately added under 30 Texas Administrative Code § 116.115(c)(1) and are consistent with the TCAA.
77. CCL has made all demonstrations required under applicable federal and state laws and regulations regarding air permit applications, including 30 Texas Administrative Code § 116.111, to be issued an air quality permit with PSD review.
78. The Draft Permit contains all of the applicable conditions required by the Texas Health and Safety Code and Commission rules.
79. Pursuant to Texas Health and Safety Code § 382.0518 and 30 Texas Administrative Code § 116.111, CCL demonstrated that the emissions from the CCL Project will comply with all Commission rules and regulations and with the intent of the TCAA, including the protection of the health and physical property of the people, consistent with the longstanding interpretation of the Commission's rules, regulations, and guidance.
80. The Application for Air Quality Permit No. 105710 and PSD Permit No. PSD-TX-1306 should be approved and the attached Air Quality Permit No. 105710 and PSD-TX-1306 should be issued.
81. The assessment of reporting and transcription costs complies with 30 Texas Administrative Code § 80.23.

NOW, THEREFORE, BE IT ORDERED BY THE TEXAS COMMISSION ON ENVIRONMENTAL QUALITY THAT:

1. The Application for Air Quality Permit Nos. 105710 and PSD-TX-1306 is approved and the attached Air Quality Permit Nos. 105710 and PSD-TX-1306 is issued.
2. CCL shall comply with all findings of fact and conclusions of law contained herein.
3. The attached Air Permit Nos. 105710 and PSD-TX-1306 shall take effect on the date of issuance of this Order.

4. The ED's Response to Public Comment concerning CCL's Air Permit Nos. 105710 and PSD-TX-1306 is adopted and approved. If there is any conflict between the Commission's Order and the ED's Response to Public Comment, the Commission's Order prevails.
5. The Applicant and Sierra Club shall each pay \$750.75 in court reporting and transcript costs for this case.
6. The effective date of this Order is the date the Order is final, as provided by Texas Government Code § 2001.144 and 30 Texas Administrative Code § 80.273.
7. The Chief Clerk of the Commission shall forward a copy of this Order to all parties and issue the attached permit as changed to conform to this Order.
8. All other motions, requests for specific findings of fact or conclusions of law, and other requests for general and specific relief, if not expressly granted, are denied for want of merit.
9. If any provision, sentence, clause, or phrase of this Order is for any reason held to be invalid, the invalidity of any portion shall not affect the validity of the remaining portions of this Order.
10. The effective date of this Order is the date the Order is final, as provided by 30 Texas Administrative Code § 80.273 and Texas Government Code § 2001.144.

ISSUED:

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY

Bryan W. Shaw, Ph.D., P.E., Chairman
For the Commission